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NATIONAL BODY-BURDEN DATABASE

CHEMICALS IDENTIFIED IN FERAL AND FOOD ANIMALS

1984

VOLUME IV, Part 2

Prepared by

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Washington, DC 20460

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319-84-6
C6-H6-Cl6
MW 290.83, MP 159.5-160 C, BP 288 C, VP 0.02 mm Hg at 20 C

Clam

Tissue	Cases Exposure Route	Range	Mean	General Information
3684 Body		a) Not given b) Not given	a) 0.28 ng/g b) 0.22 ng/g	a) Site 1 b) Site 2 Collected 11/80. Pooled whole clams, mean sample wt 30 g Maine, Portland GC-EC
MAINE; BODY; DDT; POLYCHLORINATED BIPHENYLS; HEXACHLOROBENZENE; PENTACHLOROPHENOL; PHTHALATES; BIOACCUMULATION; MOLLUSKS; WATER POLLUTION; CHLORINE ORGANIC COMPOUNDS				
Ray, L.E.; Murray, H.E.; Giam, C.S. 1983 Chemosphere 12(7/8):1031-1038				

Eagle, booted
HIERAETUS PENNATUS

Tissue	Cases Exposure Route	Range	Mean	General Information
3685 Eggs	a) 1 b) 3 Ingestion	a) Not given b) Not given	a) 0.006 ppm b) 0.018 ppm Wet wt	a) Collected 1981 b) 1983 Spain GLC
EGGS; ENVIRONMENTAL EXPOSURE; SPAIN; ADULTS; METAL POISONING; DDE; DDD; DDT; DIELDRIN; HEXACHLOROCYCLOHEXANE; HEPTACHLOR EPOXIDE; ALDRIN; POLYCHLORINATED BIPHENYLS; MERCURY; LEAD; CADMIUM; COPPER; ZINC; BIOACCUMULATION; BIOCONCENTRATION; HEALTH HAZARDS; PESTICIDE RESIDUES; BIRDS; TERRESTRIAL				
Gonzales, M.J.; Hernandez, L.M.; Rico, M.C.; Baluja, G. 1984 Journal of Environmental Health and Science				

Eagle, imperial
AQUILA HELIACA

Tissue	Cases Exposure Route	Range	Mean	General Information
3686 Eggs	a) 6 b) 3 Ingestion	a) Not given b) Not given	a) 0.032 ppm b) 0.020 ppm Wet wt	a) Collected 1980 b) 1981. Spain GLC
EGGS; ENVIRONMENTAL EXPOSURE; SPAIN; ADULTS; METAL POISONING; DDE; DDD; DDT; DIELDRIN; HEXACHLOROCYCLOHEXANE; HEPTACHLOR EPOXIDE; ALDRIN; POLYCHLORINATED BIPHENYLS; MERCURY; LEAD; CADMIUM; COPPER; ZINC; BIOACCUMULATION; BIOCONCENTRATION; HEALTH HAZARDS; PESTICIDE RESIDUES; BIRDS; TERRESTRIAL				
Gonzales, M.J.; Hernandez, L.M.; Rico, M.C.; Baluja, G. 1984 Journal of Environmental Health and Science				

Cyclohexane, 1,2,3,4,5,6-hexachloro-, alpha- (8 CI); Cyclohexane, 1,2,3,4,5,6-hexachloro-, (1alpha,2alpha,3beta,4alpha,5beta,6beta)- (9 CI)
319-84-6
C6-H6-Cl6
MW 290.83, MP 159.5-160 C, BP 288 C, VP 0.02 mm Hg at 20 C

Goldeye
HIODON ALOSOIDES

Tissue	Cases Exposure Route	Range	Mean	General Information
3687 Adipose	a) 135 b) 16 c) 29 Ingestion	a) 0.019-0.170 mg/kg b) Not detected-0.044 mg/kg c) 0.053-0.120 mg/kg Wet wt	a) 0.089 mg/kg b) 0.017 mg/kg c) 0.74 mg/kg [sic] Wet wt	a) North Saskatchewan River below Edmonton b) Red Deer River below city of Red Deer c) South Saskatchewan River Intestinal fat. Lindane (gamma-BHC) found in c), widely used pesticide. Canada, Alberta GC-EC

FISHES; CANADA; PESTICIDE RESIDUES; CHLORINE ORGANIC COMPOUNDS; POLYCHLORINATED BIPHENYLS; BIOLOGICAL MONITORING; AQUATIC; BIOCONCENTRATION; ENVIRONMENTAL EXPOSURE; WATER POLLUTION; POLYCHLORINATED BIPHENYLS; DDE; DDD; DIELDRIN; HEXACHLOROBENZENE; HEXACHLOROCYCLOHEXANE

Chovelon, A.; George, L.; Gulayets, C.; Hoyano, Y.; McGuinness, E.; Moore, J.; Ramamoorthy, S.; Ramamoorthy, S.; Singer, P.; Smiley, K.; Wheatly A. 1984 Chemosphere 13(1)19-32

Hobby
FALCO SUBBUTEO

Tissue	Cases Exposure Route	Range	Mean	General Information
3688 Eggs	a) 3 b) 4 Ingestion	a) Not given b) Not given	a) 0.001 ppm b) 0.009 ppm Wet wt	a) Collected 1982 b) 1983 Spain GLC

EGGS; ENVIRONMENTAL EXPOSURE; SPAIN; ADULTS; METAL POISONING; DDE; DDD; DDT; DIELDRIN; HEXACHLOROCYCLOHEXANE; HEPTACHLOR EPOXIDE; ALDRIN; POLYCHLORINATED BIPHENYLS; MERCURY; LEAD; CADMIUM; COPPER; ZINC; BIOACCUMULATION; BIOCONCENTRATION; HEALTH HAZARDS; PESTICIDE RESIDUES; BIRDS; TERRESTRIAL

Gonzales, M.J.; Hernandez, L.M.; Rico, M.C.; Baluja, G. 1984 Journal of Environmental Health and Science

Kite, black
MILVUS MIGRANS

Tissue	Cases Exposure Route	Range	Mean	General Information
3689 Eggs	a) 2 b) 5 Ingestion	a) Not given b) Not given	a) 0.004 ppm b) 0.020 ppm Wet wt	a) Collected 1981 b) 1982. Spain GLC

EGGS; ENVIRONMENTAL EXPOSURE; SPAIN; ADULTS; METAL POISONING; DDE; DDD; DDT; DIELDRIN; HEXACHLOROCYCLOHEXANE; HEPTACHLOR EPOXIDE; ALDRIN; POLYCHLORINATED BIPHENYLS; MERCURY; LEAD; CADMIUM; COPPER; ZINC; BIOACCUMULATION; BIOCONCENTRATION; HEALTH HAZARDS; PESTICIDE RESIDUES; BIRDS; TERRESTRIAL

Gonzales, M.J.; Hernandez, L.M.; Rico, M.C.; Baluja, G. 1984 Journal of Environmental Health and Science

Cyclohexane, 1,2,3,4,5,6-hexachloro-, alpha- (8 CI); Cyclohexane, 1,2,3,4,5,6-hexachloro-, (1alpha,2alpha,3beta,4alpha,5beta,6beta)- (9 CI)
319-84-6
C6-H6-Cl6
MW 290.83, MP 159.5-160 C, BP 288 C, VP 0.02 mm Hg at 20 C

Kite, red
MILVUS MILVUS

Tissue	Cases Exposure Route	Range	Mean	General Information
3690 Eggs	a) 4 b) 2 Ingestion	a) Not given b) Not given	a) 0.031 ppm b) 0.002 ppm Wet wt	a) Collected 1981 b) 1983 Spain GLC

EGGS; ENVIRONMENTAL EXPOSURE; SPAIN; ADULTS; METAL POISONING; DDE; DDD; DDT; DIELDRIN; HEXACHLOROCYCLOHEXANE; HEPTACHLOR EPOXIDE; ALDRIN; POLYCHLORINATED BIPHENYLS; MERCURY; LEAD; CADMIUM; COPPER; ZINC; BIOACCUMULATION; BIOCONCENTRATION; HEALTH HAZARDS; PESTICIDE RESIDUES; BIRDS; TERRESTRIAL

Gonzalez, M.J.; Hernandez, L.M.; Rico, M.C.; Baluja, G. 1984 Journal of Environmental Health and Science

Pike, northern
ESOX LUCIUS

Tissue	Cases Exposure Route	Range	Mean	General Information
3691 Adipose	a) 50 b) 28 c) 20 d) 7 Ingestion	a) Not detected-0.019 mg/kg b) 0.033-0.090 mg/kg c) 0.008-0.173 mg/kg d) 0.091-0.148 mg/kg Wet wt	a) 0.001 mg/kg b) 0.066 mg/kg c) 0.062 mg/kg d) 0.130 mg/kg Wet wt	a) North Saskatchewan River below Edmonton b) Battle River c) Lake Wabamun, isolated area d) McGregor Lake Intestinal fat. Canada, Alberta GC-EC

FISHES; CANADA; PESTICIDE RESIDUES; CHLORINE ORGANIC COMPOUNDS; POLYCHLORINATED BIPHENYLS; BIOLOGICAL MONITORING; AQUATIC; BIOCONCENTRATION; ENVIRONMENTAL EXPOSURE; WATER POLLUTION; POLYCHLORINATED BIPHENYLS; DDE; DDD; DIELDRIN; HEXACHLOROBENZENE; HEXACHLOROCYCLOHEXANE

Chovelon, A.; George, L.; Gulayets, C.; Hoyano, Y.; McGuinness, E.; Moore, J.; Ramamoorthy, S.; Ramamoorthy, S.; Singer, P.; Smiley, K.; Wheatly A. 1984 Chemosphere 13(1)19-32

Sauger
STIZOSTEDION CANADENSE

Tissue	Cases Exposure Route	Range	Mean	General Information
3692 Adipose	a) 23 b) 32 c) 27 Ingestion	a) 0.033-0.057 mg/kg b) Not detected-0.148 mg/kg c) 0.033-0.138 mg/kg Wet wt	a) 0.052 mg/kg b) 0.116 mg/kg c) 0.101 mg/kg Wet wt	a) Red Deer River, below city of Red Deer b) South Saskatchewan River c) Oldman River Intestinal fat. Lindane (gamma-BHC), detected in c), widely used pesticide. Canada, Alberta GC-EC

FISHES; CANADA; PESTICIDE RESIDUES; CHLORINE ORGANIC COMPOUNDS; POLYCHLORINATED BIPHENYLS; BIOLOGICAL MONITORING; AQUATIC; BIOCONCENTRATION; ENVIRONMENTAL EXPOSURE; WATER POLLUTION; POLYCHLORINATED BIPHENYLS; DDE; DDD; DIELDRIN; HEXACHLOROBENZENE; HEXACHLOROCYCLOHEXANE

Chovelon, A.; George, L.; Gulayets, C.; Hoyano, Y.; McGuinness, E.; Moore, J.; Ramamoorthy, S.; Ramamoorthy, S.; Singer, P.; Smiley, K.; Wheatly A. 1984 Chemosphere 13(1)19-32

Cyclohexane, 1,2,3,4,5,6-hexachloro-, alpha- (8 CI); Cyclohexane, 1,2,3,4,5,6-hexachloro-, (1alpha,2alpha,3beta,4alpha,5beta,6beta)- (9 CI)
319-84-6
C6-H6-Cl6
MW 290.83, MP 159.5-160 C, BP 288 C, VP 0.02 mm Hg at 20 C

Sheep
OVIS sp.

Tissue	Cases Exposure Route	Range	Mean	General Information
3693 Adipose	a) 26 b) 20 c) 18 d) 20 e) 30 Ingestion	a) Not given b) Not given c) Not given d) Not given e) Not given	a) 17 ppb b) 15 ppb c) 8 ppb d) 10 ppb e) 6 ppb	a) Biskra b) Chellala c) El-Eulama d) Souk-Ahras e) Tebessa Region of country in which animal was raised. Tebessa region has no annual insect-control program, other regions do. Algeria GC

ADIPOSE TISSUE; SHEEP; TERRESTRIAL; ENVIRONMENTAL EXPOSURE; ALGERIA; DDT; DDE; HEXACHLOROCYCLOHEXANE; LINDANE; BIOACCUMULATION
Alamir, B.; Venant, A.; Bac, L.R. 1984 Archives of Toxicology Suppl. 7:451-452

Sucker, longnose
CATOSTOMUS CATOSTOMUS

Tissue	Cases Exposure Route	Range	Mean	General Information
3694 Adipose	a) 54 b) 24 Ingestion	a) 0.029-0.077 mg/kg b) Not detected-0.008 mg/kg Wet wt	a) 0.056 mg/kg b) 0.008 mg/kg Wet wt	a) North Saskatchewan River below Edmonton b) Oldman River Intestinal fat. Canada, Alberta GC-EC

FISHES; CANADA; PESTICIDE RESIDUES; CHLORINE ORGANIC COMPOUNDS; POLY CHLORINATED BIPHENYLS; BIOLOGICAL MONITORING; AQUATIC; BIOCONCENTRATION; ENVIRONMENTAL EXPOSURE; WATER POLLUTION; POLYCHLORINATED BIPHENYLS; DDE; DDD; DIELDRIN; HEXACHLOROBENZENE; HEXACHLOROCYCLOHEXANE
Chovelon, A.; George, L.; Gulayets, C.; Hoyano, Y.; McGuinness, E.; Moore, J.; Ramamoorthy, S.; Ramamoorthy, S.; Singer, P.; Smiley, K.; Wheatly A. 1984 Chemosphere 13(1)19-32

Sucker, white
CATOSTOMUS COMMERSONI

Tissue	Cases Exposure Route	Range	Mean	General Information
3695 Adipose	a) 40 b) 20 c) 16 d) 17 Ingestion	a) Not detected-0.146 mg/kg b) 0.018-0.090 mg/kg c) 0.004-0.028 mg/kg d) 0.061-0.142 mg/kg Wet wt	a) 0.059 mg/kg b) 0.054 mg/kg c) 0.088 mg/kg d) 0.088 mg/kg Wet wt	a) North Saskatchewan River below Edmonton b) Battle River c) Beaver River d) Lake Wabamun Intestinal fat. Canada, Alberta GC-EC

FISHES; CANADA; PESTICIDE RESIDUES; CHLORINE ORGANIC COMPOUNDS; POLYCHLORINATED BIPHENYLS; BIOLOGICAL MONITORING; AQUATIC; BIOCONCENTRATION; ENVIRONMENTAL EXPOSURE; WATER POLLUTION; POLYCHLORINATED BIPHENYLS; DDE; DDD; DIELDRIN; HEXACHLOROBENZENE; HEXACHLOROCYCLOHEXANE
Chovelon, A.; George, L.; Gulayets, C.; Hoyano, Y.; McGuinness, E.; Moore, J.; Ramamoorthy, S.; Ramamoorthy, S.; Singer, P.; Smiley, K.; Wheatly A. 1984 Chemosphere 13(1)19-32

Cyclohexane, 1,2,3,4,5,6-hexachloro-, alpha- (8 CI); Cyclohexane, 1,2,3,4,5,6-hexachloro-, (1alpha,2alpha,3beta,4alpha,5beta,6beta)- (9 CI)
319-84-6
C6-H6-Cl6
MW 290.83, MP 159.5-160 C, BP 288 C, VP 0.02 mm Hg at 20 C

Trout, brown
SALMO TRUTTA

Tissue	Cases Exposure Route	Range	Mean	General Information
3696 Adipose	22 Ingestion	Not detected-0.011 mg/kg Wet wt	0.001 mg/kg Wet wt	Bow River below Calgary Intestinal fat. Canada, Alberta GC-EC

FISHES; CANADA; PESTICIDE RESIDUES; CHLORINE ORGANIC COMPOUNDS; POLYCHLORINATED BIPHENYLS; BIOLOGICAL MONITORING; AQUATIC; BIOCONCENTRATION; ENVIRONMENTAL EXPOSURE; WATER POLLUTION; POLYCHLORINATED BIPHENYLS; DDE; DDD; DIELDRIN; HEXACHLOROBENZENE; HEXACHLOROCYCLOHEXANE
Chovelon, A.; George, L.; Gulayets, C.; Hoyano, Y.; McGuinness, E.; Moore, J.; Ramamoorthy, S.; Ramamoorthy, S.; Singer, P.; Smiley, K.; Wheatly A. 1984 Chemosphere 13(1)19-32

Walleye
STIZOSTEDION VITREUM VITREUM

Tissue	Cases Exposure Route	Range	Mean	General Information
3697 Adipose	a) 65 b) 21 c) 17 d) 28 Ingestion	a) Not detectable-0.132 mg/kg b) 0.008-0.072 mg/kg c) Not detectable-0.020 mg/kg d) 0.092-0.180 mg/kg Wet wt	a) 0.079 mg/kg b) 0.065 mg/kg c) 0.008 mg/kg d) 0.113 mg/kg Wet wt	a) North Saskatchewan River below Edmonton b) Beaver River c) Bow River below Calgary d) St. Mary's River Intestinal fat. Canada, Alberta GC-EC

FISHES; CANADA; PESTICIDE RESIDUES; CHLORINE ORGANIC COMPOUNDS; POLYCHLORINATED BIPHENYLS; BIOLOGICAL MONITORING; AQUATIC; BIOCONCENTRATION; ENVIRONMENTAL EXPOSURE; WATER POLLUTION; POLYCHLORINATED BIPHENYLS; DDE; DDD; DIELDRIN; HEXACHLOROBENZENE; HEXACHLOROCYCLOHEXANE
Chovelon, A.; George, L.; Gulayets, C.; Hoyano, Y.; McGuinness, E.; Moore, J.; Ramamoorthy, S.; Ramamoorthy, S.; Singer, P.; Smiley, K.; Wheatly A. 1984 Chemosphere 13(1)19-32

Whitefish, lake
COREGONUS CLUPEAFORMIS

Tissue	Cases Exposure Route	Range	Mean	General Information
3698 Adipose	a) 21 b) 19 c) 14 Ingestion	a) Not detected-0.055 mg/kg b) 0.011-0.094 mg/kg c) Not detected-0.151 mg/kg Wet wt	a) 0.038 mg/kg b) 0.049 mg/kg c) 0.068 mg/kg Wet wt	a) Red Deer River below city of Red Deer b) Lake Newell c) McGregor Lake Intestinal fat. Canada, Alberta GC-EC

FISHES; CANADA; PESTICIDE RESIDUES; CHLORINE ORGANIC COMPOUNDS; POLYCHLORINATED BIPHENYLS; BIOLOGICAL MONITORING; AQUATIC; BIOCONCENTRATION; ENVIRONMENTAL EXPOSURE; WATER POLLUTION; POLYCHLORINATED BIPHENYLS; DDE; DDD; DIELDRIN; HEXACHLOROBENZENE; HEXACHLOROCYCLOHEXANE
Chovelon, A.; George, L.; Gulayets, C.; Hoyano, Y.; McGuinness, E.; Moore, J.; Ramamoorthy, S.; Ramamoorthy, S.; Singer, P.; Smiley, K.; Wheatly A. 1984 Chemosphere 13(1)19-32

Cyclohexane, 1,2,3,4,5,6-hexachloro-, alpha- (8 CI); Cyclohexane, 1,2,3,4,5,6-hexachloro-, (1alpha,2alpha,3beta,4alpha,5beta,6beta)- (9 CI)
319-84-6
C6-H6-Cl6
MW 290.83, MP 159.5-160 C, BP 288 C, VP 0.02 mm Hg at 20 C

Whitefish, mountain
PROSOPIUM WILLIAMSONI

Tissue	Cases Exposure Route	Range	Mean	General Information
3699 Adipose	60 Ingestion	Not detected-0.031 mg/kg Wet wt	0.019 mg/kg Wet wt	Bow River below Calgary Intestinal fat. Canada, Alberta GC-EC

FISHES; CANADA; PESTICIDE RESIDUES; CHLORINE ORGANIC COMPOUNDS; POLYCHLORINATED BIPHENYLS; BIOLOGICAL MONITORING; AQUATIC; BIOCONCENTRATION; ENVIRONMENTAL EXPOSURE; WATER POLLUTION; POLYCHLORINATED BIPHENYLS; DDE; DDD; DIELDRIN; HEXACHLOROBENZENE; HEXACHLOROCYCLOHEXANE
Chovelon, A.; George, L.; Gulayets, C.; Hoyano, Y.; McGuinness, E.; Moore, J.; Ramamoorthy, S.; Ramamoorthy, S.; Singer, P.; Smiley, K.; Wheatly A. 1984 Chemosphere 13(1)19-32

Cyclohexane, 1,2,3,4,5,6-hexachloro-, beta- (8 CI); Cyclohexane, 1,2,3,4,5,6-hexachloro-, (1alpha,2beta,3alpha,4beta,5alpha,6beta)- (9 CI)
319-85-7
C6-H6-Cl6
MW 290.83, MP 314-315 C (sublimes), BP 60 C at 0.58 mm Hg, VP 0.005 mm Hg at 20 C

Heron, black-crowned night
NYCTICORAX NYCTICORAX

Tissue	Cases Exposure Route	Range	Mean	General Information
3700 Eggs	147	Not given	0.88 ppm	Collected between May 17 and June 1, 1979. Possible sources: nesting and feeding habitats, or migration routes and wintering grounds in Mexico. Colorado; Wyoming GC; EC

EGGS; BIRDS; ENVIRONMENTAL EXPOSURE; COLORADO; WYOMING; CHLORINE ORGANIC COMPOUNDS; DDD; DDE; DDT; DIELDRIN; HEPTACHLOR EPOXIDE; OXYCHLORDANE; NONACHLOR; HEXACHLOROBENZENE; HEXACHLOROCYCLOHEXANE; POLYCHLORINATED BIPHENYLS; ANIMAL POPULATIONS; BIOLOGICAL MONITORING; PESTICIDE RESIDUES; LAND POLLUTION; WATER POLLUTION; AQUATIC
McEwen, L.C.; Stafford, C.J.; Hensler, G.L 1984 Environmental Toxicology and Chemistry 3:367-376

Puffin
FRATERCULA ARCTICA

Tissue	Cases Exposure Route	Range	Mean	General Information
3701 Eggs	20 Ingestion	16-67 ng/g Fat wt	32+/-14 ng/g Fat wt	Collected at Hernyken, Rost, during 5/83. Norway GC

(next page)

Cyclohexane, 1,2,3,4,5,6-hexachloro-, beta- (8 CI); Cyclohexane, 1,2,3,4,5,6-hexachloro-, (1alpha,2beta,3alpha,4beta,5alpha,6beta)- (9 CI)
319-85-7
C6-H6-Cl6
MW 290.83, MP 314-315 C (sublimes), BP 60 C at 0.58 mm Hg, VP 0.005 mm Hg at 20 C

Puffin
FRATERCULA ARCTICA

(continued)

Tissue	Cases Exposure Route	Range	Mean	General Information
3702 Liver	5 Ingestion	Not detected-50 ng/g Fat wt	26+/-16 ng/g Fat wt	Chicks collected at Hernyken, Rost, 7/83. Adults and chicks collected in 1982 had no detectable levels. Norway GC
3703 Uropygial gland	5 Ingestion	71-194 ng/g Fat wt	129+/-48 ng/g Fat wt	Collected at Hernyken, Rost, 7/82. Norway GC

LIVER; BRAIN; UROPYGIAL GLAND; EGGS; WATERFOWL; AQUATIC; ENVIRONMENTAL EXPOSURE; NORWAY; ADULTS; JUVENILES; ALDRIN; DDE; HEXACHLOROBENZENE; POLYCHLORINATED BIPHENYLS; HEXACHLOROCYCLOHEXANE; DIELDRIN; PESTICIDES; BIOACCUMULATION; FOOD CONTAMINATION; WATER POLLUTION; INDUSTRIAL POLLUTION; PESTICIDE RESIDUES

Ingebrigtsen, K.; Skaare, J.U.; Teigen, S.W. 1984 Journal of Toxicology and Environmental Health 14:813-828

Sheep
OVIS sp.

Tissue	Cases Exposure Route	Range	Mean	General Information
3704 Adipose	a) 26 b) 29 c) 18 d) 29 e) 30	a) Not given b) Not given c) Not given d) Not given e) Not given	a) 100 ppb b) 15 ppb c) 12 ppb d) 12 ppb e) 8 ppb	a) Biskra b) Chellala c) El-Eulama d) Souk-Ahras e) Tebessa Region of country in which animal was raised. Tebessa region has no annual insect-control program, other regions do. Algeria GC

ADIPOSE TISSUE; SHEEP; TERRESTRIAL; ENVIRONMENTAL EXPOSURE; ALGERIA; DDT; DDE; HEXACHLOROCYCLOHEXANE; LINDANE; BIOACCUMULATION

Alamir, B.; Venant, A.; Bac, L.R. 1984 Archives of Toxicology Suppl. 7:451-452

Cyclohexane, 1,2,3,4,5,6-hexachloro-, gamma- (8 CI); Cyclohexane, 1,2,3,4,5,6-hexachloro-, (1alpha,2alpha,3beta,4alpha,5alpha,6beta)- (9 CI)
58-89-9
C6-H6-Cl6
MW 290.85, MP gamma-isomer crystals 112.5 C, BP 323.4 C, 176.2 C at 10 mm Hg, VP 0.14 mm Hg at 40 C
Cattle
BOS sp.

Tissue	Cases Exposure Route	Range	Mean	General Information
3705 Brain	a) 1 b) 1 Ingestion	Not applicable	a) 15 mg/kg b) 0.04 mg/kg	a) Estimated dose, 2300-2500 mg b) Estimated dose, 1100-1300 mg 16-18 wk old Holstein calves, maliciously dosed. Mean lethal dose of 10% emulsifiable concentrate was 22 mg/kg body wt. Canada, Ontario, Middlesex County Convulsions, collapse, death within 1 hr (calf a) or 50 hr (calf b). Post mortem (calf b) revealed congested esophagus, left lung partially atelectate, and urine dark amber color. GC-EC
3706 Heart	a) 1 b) 1 Ingestion	Not applicable	a) 37 mg/kg b) 0.6 mg/kg	a) Estimated dose, 2300-2500 mg b) Estimated dose, 1100-1300 mg 16-18 wk old Holstein calves, maliciously dosed. Mean lethal dose of 10% emulsifiable concentrate was 22 mg/kg body wt. Canada, Ontario, Middlesex County Convulsions, collapse, death within 1 hr (calf a) or 50 hr (calf b). Post mortem (calf b) revealed congested esophagus, left lung partially atelectate, and urine dark amber color. GC-EC
3707 Kidney	a) 1 b) 1 Ingestion	Not applicable	a) 14 mg/kg b) 2.0 mg/kg	a) Estimated dose, 2300-2500 mg b) Estimated dose, 1100-1300 mg 16-18 wk old Holstein calves, maliciously dosed. Mean lethal dose of 10% emulsifiable concentrate was 22 mg/kg body wt. Canada, Ontario, Middlesex County Convulsions, collapse, death within 1 hr (calf a) or 50 hr (calf b). Post mortem (calf b) revealed congested esophagus, left lung partially atelectate, and urine dark amber color. GC-EC
3708 Liver	a) 1 b) 1 Ingestion	Not applicable	a) 27 mg/kg b) 0.6 mg/kg	a) Estimated dose, 2300-2500 mg b) Estimated dose, 1100-1300 mg 16-18 wk old Holstein calves, maliciously dosed. Mean lethal dose of 10% emulsifiable concentrate was 22 mg/kg body wt. Canada, Ontario, Middlesex County Convulsions, collapse, death within 1 hr (calf a) or 50 hr (calf b). Post mortem (calf b) revealed congested esophagus, left lung partially atelectate, and urine dark amber color. GC-EC

CATTLE; JUVENILES; LIVER; URINE; BRAIN; KIDNEYS; HEART; DELIBERATE EXPOSURE; CANADA; TERRESTRIAL; PESTICIDES

Frank, R.; Braun, H.E. 1984 Bulletin of Environmental Contamination and Toxicology 32:533-536

Cyclohexane, 1,2,3,4,5,6-hexachloro-, gamma- (8 CI); Cyclohexane, 1,2,3,4,5,6-hexachloro-, (1alpha,2alpha,3beta,4alpha,5alpha,6beta)- (9 CI)
58-89-9
C6-H6-Cl6
MW 290.85, MP gamma-isomer crystals 112.5 C, BP 323.4 C, 176.2 C at 10 mm Hg, VP 0.14 mm Hg at 40 C

Cattle
BOS sp.

Tissue	Cases Exposure Route	Range	Mean	General Information
3709 Milk	Ingestion	a) 0.02-0.02 ppm b) 0.02-0.01 ppm c) 0.01-0.01 ppm d) 0.02-0.02 ppm e) 0.01-</= 0.001 ppm	a) Not given b) Not given c) Not given d) Not given e) Not given	a) 1972 & 3 b) 1974 & 5 c) 1976 & 7 d) 1978 & 9 e) 1980 & 1 Range of yearly means. Composite samples from several farms. Decreased gradually over 10 yr. In statewide monitoring for chlorinated hydrocarbon insecticides, percentage contaminated samples decreased over study period. Illinois GC/MS
INSECTICIDES; PESTICIDE RESIDUES; MILK; CATTLE; ILLINOIS; BIOLOGICAL MONITORING; BIOCONCENTRATION; ALDRIN; DIELDRIN; DDT; METABOLITES; HEPTACHLOR EPOXIDE; TERRESTRIAL; CHLORINATED HYDROCARBONS; ENVIRONMENTAL EXPOSURE; HEXACHLOROCYCLOHEXANE				
Steffey, K.L.; Mack, J.; MacMonegle, C.W.; Pettyl, H.B. 1984 Journal of Environmental Science and Health B19(1):49-65				

Tissue	Cases Exposure Route	Range	Mean	General Information
3710 Urine	a) 1 b) 1 Ingestion	Not applicable	a) 67 mg/kg b) 6.5 mg/kg	a) Estimated dose, 2300-2500 mg b) Estimated dose, 1100-1300 mg 16-18 wk old Holstein calves, maliciously dosed. Mean lethal dose of 10% emulsifiable concentrate was 22 mg/kg body wt. Canada, Ontario, Middlesex County Convulsions, collapse, death within 1 hr (calf a) or 50 hr (calf b). Post mortem (calf b) revealed congested esophagus, left lung partially atelectate, and urine dark amber color. GC-EC
CATTLE; JUVENILES; LIVER; URINE; BRAIN; KIDNEYS; HEART; DELIBERATE EXPOSURE; CANADA; TERRESTRIAL; PESTICIDES				
Frank, R.; Braun, H.E. 1984 Bulletin of Environmental Contamination and Toxicology 32:533-536				

Cyclohexane, 1,2,3,4,5,6-hexachloro-, gamma- (8 CI); Cyclohexane, 1,2,3,4,5,6-hexachloro-, (1alpha,2alpha,3beta,4alpha,5alpha,6beta)- (9 CI)
58-89-9
C6-H6-Cl6
MW 290.85, MP gamma-isomer crystals 112.5 C, BP 323.4 C, 176.2 C at 10 mm Hg, VP 0.14 mm Hg at 40 C

Clam, hard-shell
MERCENARIA MERCENARIA

Tissue	Cases Exposure Route	Range	Mean	General Information
3711 Body	a) 213 b) 138 c) 96 d) 262 e) 379 Ingestion	a) Not detected-0.004 ug/g b) Not detected-trace c) Not detected-trace d) Not detected-0.009 ug/g e) Trace-0.004 ug/g Wet wt	a) Not detected b) Not detected c) Not detected d) Trace e) 0.002 ug/g Wet wt	a) 1976 b) 1977 c) 1978 d) 1979 e) 1980 Data include soft-shell clam, MYA ARENARIA. Biological monitoring for organochlorine residues in shellfish, 1976-1980. Virtually all values below FDA guidelines or safe levels. Sample size small, no yearly periodic variation after 1976. Maryland, Chesapeake Bay area, tributaries GC-EC

CLAMS; CRABS; SHELLFISH; OYSTERS; MARYLAND; CHESAPEAKE BAY; BIOLOGICAL MONITORING; BIOCONCENTRATION; WATER POLLUTION; FOOD CONTAMINATION; CHLORINE ORGANIC COMPOUNDS; DDD; DDE; POLYCHLORINATED BIPHENYLS; CHLORDANE; DIELDRIN; BHC; AQUATIC; ENVIRONMENTAL EXPOSURE

Eisenberg, M.; Topping, J.J. 1984 Journal of Environmental Science and Health B19(7):673-688

Clam, short-necked
VENERUPIS JAPONICA

Tissue	Cases Exposure Route	Range	Mean	General Information
3712 Body	20 Ingestion	a) 0.5-0.4 ppm b) 0.2-0.1 ppm c) 0.08-0.04 ppm d) 0.06-0.03 ppm	a) Not applicable b) Not applicable c) Not applicable d) Not applicable	a) Delta-isomer, 0-4 d b) Beta-isomer, 0-4 d c) Alpha-isomer, 0-4 d d) Gamma-isomer, 0-4 d Peaks at 0 times. Elimination after 10 d exposure to 1, 2, 1, and 2 ppb of alpha, beta, gamma, and delta isomers, respectively. 4 time points, 5 cases/point. Japan GLC

BODY; DELIBERATE EXPOSURE; CLAMS; FISHES; JAPAN; PESTICIDES; HEXACHLOROCYCLOHEXANE; ACCIDENTAL POISONING; BIOACCUMULATION; LAND POLLUTION; WATER POLLUTION; PESTICIDE RESIDUES

Yamato, Y.; Kiyonaga, M.; Watanabe, T. 1983 Bulletin of Environmental Contamination and Toxicology 31:352-359

Cyclohexane, 1,2,3,4,5,6-hexachloro-, gamma- (8 CI); Cyclohexane, 1,2,3,4,5,6-hexachloro-, (1alpha,2alpha,3beta,4alpha,5alpha,6beta)- (9 CI)
58-89-9
C6-H6-Cl6
MW 290.85, MP gamma-isomer crystals 112.5 C, BP 323.4 C, 176.2 C at 10 mm Hg, VP 0.14 mm Hg at 40 C

Clam, soft-shell
MYA ARENARIA

Tissue	Cases Exposure Route	Range	Mean	General Information
3713 Body	a) 26 b) 7 c) 18 d) 115 e) 34 Ingestion	a) Not detected-0.004 ug/g b) Not detected-trace c) Not detected-trace d) Not detected-0.009 ug/g e) Trace-0.004 ug/g Wet wt	a) Not detected b) Not detected c) Not detected d) Trace e) 0.002 ug/g Wet wt	a) 1976 b) 1977 c) 1978 d) 1979 e) 1980 Data include hard-shell clam, MERCENARIA MERCENARIA. Biological monitoring for organochlorine residues in shellfish 1976-1980. Virtually all values below FDA guidelines or safe levels. Sample size small, no yearly periodic variation. Maryland, Chesapeake Bay area, tributaries GC-EC

CLAMS; CRABS; SHELLFISH; OYSTERS; MARYLAND; CHESAPEAKE BAY; BIOLOGICAL MONITORING; BIOCONCENTRATION; WATER POLLUTION; FOOD CONTAMINATION; CHLORINE ORGANIC COMPOUNDS; DDD; DDE; POLYCHLORINATED BIPHENYLS; CHLORDANE; DIELDRIN; BHC; AQUATIC; ENVIRONMENTAL EXPOSURE
Eisenberg, M.; Topping, J.J. 1984 Journal of Environmental Science and Health B19(7):673-688

Coot, American
FULICA AMERICANA

Tissue	Cases Exposure Route	Range	Mean	General Information
3714 Body	1	Not detected-0.08 ppm Wet wt	0.03 ppm Wet wt	Lake Providence, 10.6% lipids. Collected 2/80. Secondary consumers. Lakes acting as sumps. Louisiana GC

BODY; ENVIRONMENTAL EXPOSURE; LOUISIANA; CHLORINE ORGANIC COMPOUNDS; INSECTICIDES; BIOMAGNIFICATION; FISHES; AGRICULTURE; PESTICIDE RESIDUES; AQUATIC; TERRESTRIAL; BIRDS; SNAKES; FROGS; CRAYFISH
Niethammer, K.R.; White, D.H.; Baskett, T.S.; Sayre, M.W. 1984 Archives of Contamination and Toxicology 13:63-74

Cottonmouth
AGKISTRODON PISCIVOROUS

Tissue	Cases Exposure Route	Range	Mean	General Information
3715 Body	1	Not detected-0.11 ppm Wet wt	0.02 ppm Wet wt	Lake Bruin, 2.5% lipids. Collected 6/15-9/25/80. Tertiary consumers, major foods are snakes, fish and frogs. Lakes acting as sumps. Louisiana GC

BODY; ENVIRONMENTAL EXPOSURE; LOUISIANA; CHLORINE ORGANIC COMPOUNDS; INSECTICIDES; BIOMAGNIFICATION; FISHES; AGRICULTURE; PESTICIDE RESIDUES; AQUATIC; TERRESTRIAL; BIRDS; SNAKES; FROGS; CRAYFISH
Niethammer, K.R.; White, D.H.; Baskett, T.S.; Sayre, M.W. 1984 Archives of Contamination and Toxicology 13:63-74

Cyclohexane, 1,2,3,4,5,6-hexachloro-, gamma- (8 CI); Cyclohexane, 1,2,3,4,5,6-hexachloro-, (1alpha,2alpha,3beta,4alpha,5alpha,6beta)- (9 CI)
58-89-9
C6-H6-Cl6
MW 290.85, MP gamma-isomer crystals 112.5 C, BP 323.4 C, 176.2 C at 10 mm Hg, VP 0.14 mm Hg at 40 C

Crab, blue
CALLINECTES SAPIDUS

Tissue	Cases Exposure Route	Range	Mean	General Information
8716 Body	a) 8 b) 9 c) 22 Ingestion	a) Not detected b) Not detected-0.004 ug/g c) Not detected-0.002 ug/g Wet wt	a) Not detected b) Trace c) Trace	a) 1976 b) 1979 c) 1980 Biological monitoring for organochlorine residues in shellfish, 1976-1980. Virtually all values below FDA guidelines or safe levels. Sample size small (none 1978), mostly in 1979-1980, not possible to see yearly trend. Data not available 1977. Maryland, Chesapeake Bay area, tributaries GC-EC
CLAMS; CRABS; SHELLFISH; OYSTERS; MARYLAND; CHESAPEAKE BAY; BIOLOGICAL MONITORING; BIOCONCENTRATION; WATER POLLUTION; FOOD CONTAMINATION; CHLORINE ORGANIC COMPOUNDS; DDD; DDE; POLYCHLORINATED BIPHENYLS; CHLORDANE; DIELDRIN; BHC; AQUATIC; ENVIRONMENTAL EXPOSURE Eisenberg, M.; Topping, J.J. 1984 Journal of Environmental Science and Health B19(7):673-688				

Eagle, booted
HIERAETUS PENNATUS

Tissue	Cases Exposure Route	Range	Mean	General Information
8717 Eggs	a) 1 b) 3 Ingestion	a) Not given b) Not given	a) 0.272 ppm b) 0.509 ppm Wet wt	a) Collected 1981 b) 1983. Spain GLC
EGGS; ENVIRONMENTAL EXPOSURE; SPAIN; ADULTS; METAL POISONING; DDE; DDD; DDT; DIELDRIN; HEXACHLOROCYCLOHEXANE; HEPTACHLOR EPOXIDE; ALDRIN; POLYCHLORINATED BIPHENYLS; MERCURY; LEAD; CADMIUM; COPPER; ZINC; BIOACCUMULATION; BIOCONCENTRATION; HEALTH HAZARDS; PESTICIDE RESIDUES; BIRDS; TERRESTRIAL Gonzales, M.J.; Hernandez, L.M.; Rico, M.C.; Baluja, G. 1984 Journal of Environmental Health and Science				

Eagle, imperial
AQUILA HELIACA

Tissue	Cases Exposure Route	Range	Mean	General Information
8718 Eggs	a) 6 b) 3 c) 3 d) 10 Ingestion	a) Not given b) Not given c) Not given d) Not given	a) 0.055 ppm b) 0.051 ppm c) 0.854 ppm d) 0.030 ppm Wet wt	a) Collected 1980 b) 1981 c) 1982 d) 1983. Spain GLC
EGGS; ENVIRONMENTAL EXPOSURE; SPAIN; ADULTS; METAL POISONING; DDE; DDD; DDT; DIELDRIN; HEXACHLOROCYCLOHEXANE; HEPTACHLOR EPOXIDE; ALDRIN; POLYCHLORINATED BIPHENYLS; MERCURY; LEAD; CADMIUM; COPPER; ZINC; BIOACCUMULATION; BIOCONCENTRATION; HEALTH HAZARDS; PESTICIDE RESIDUES; BIRDS; TERRESTRIAL Gonzales, M.J.; Hernandez, L.M.; Rico, M.C.; Baluja, G. 1984 Journal of Environmental Health and Science				

Cyclohexane, 1,2,3,4,5,6-hexachloro-, gamma- (8 CI); Cyclohexane, 1,2,3,4,5,6-hexachloro-, (1alpha,2alpha,3beta,4alpha,5alpha,6beta)- (9 CI)
58-89-9
C6-H6-Cl6
MW 290.85, MP gamma-isomer crystals 112.5 C, BP 323.4 C, 176.2 C at 10 mm Hg, VP 0.14 mm Hg at 40 C

Gudgeon
GOBIO GOBIO

Tissue	Cases Exposure Route	Range	Mean	General Information
3719 Brain	120 Ingestion Inhalation Dermal	a) 70-97 ppb b) 65-759 ppb c) 167-1137 ppb d) 26-92 ppb e) 54-147 ppb	a) Not given b) Not given c) Not given d) Not given e) Not given	a) 0-23 hr before treatment b) Fed larvae contaminated with 50 ppb, peak at 316 hr c) Fed larvae with 100 ppb, peak at 433 hr d) Detoxification for b), peak at 536 hr e) Detoxification for c) peak at 536 hr Range of means. 24-457 hr of treatment (feeding and 1 ppb in water). Detoxification (no food, no lindane in water) 458-1178 hr. Levels increased exponentially with time. Significant differences between sexes, males accumulated less. Detoxification rate faster in 100 ppb group. No significant differences among treatment groups. Belgium
3720 Liver	120 Ingestion Inhalation Dermal	a) 20-190 ppb b) 184-1832 ppb c) 225-4037 ppb d) 50-205 ppb e) 65-350 ppb	a) Not given b) Not given c) Not given d) Not given e) Not given	a) 0-23 hr before treatment b) Fed larvae contaminated with 50 ppb, peak at 315 hr c) Fed larvae with 100 ppb, peak at 433 hr d) Detoxification for b), peak at 536 hr e) Detoxification for c) peak at 536 hr Range of means. 24-457 hr of treatment (feeding and 1 ppb in water). Detoxification (no food, no lindane in water) 456-1178 hr. Levels increased linearly with time. Significant differences between sexes, males higher. No significant differences among treatment groups, or detoxification rates. Belgium

LINDANE; FISHES; BELGIUM; BRAIN; LIVER; LARVAE; WATER POLLUTION; PESTICIDE RESIDUES; INSECTICIDES; AQUATIC; DELIBERATE EXPOSURE; MIDGES; SEX

Marcelle, C.; Thome, J.P. 1984 Bulletin of Environmental Contamination and Toxicology 33:423-429

Guppy
POECILIA RETICULATA

Tissue	Cases Exposure Route	Range	Mean	General Information
3721 Body	60 Ingestion	a) 0.9-0.5 ppm b) 0.5-0.04 ppm c) 0.3-0.05 ppm d) 0.3-0.05 ppm	a) Not applicable b) Not applicable c) Not applicable d) Not applicable	a) Beta-isomer, 0-9 d b) Delta-isomer, 0-9 d c) Alpha-isomer, 0-9 d d) Gamma-isomer, 0-9 d Peaks at 0 times. Elimination after 28 d exposure to 1, 2, 1, and 2 ppb of alpha, beta, gamma, and delta isomers, respectively. 6 time points, 10 cases/point. Japan GLC

BODY; DELIBERATE EXPOSURE; CLAMS; FISHES; JAPAN; PESTICIDES; HEXACHLOROCYCLOHEXANE; ACCIDENTAL POISONING; BIOACCUMULATION; LAND POLLUTION; WATER POLLUTION; PESTICIDE RESIDUES

Yamato, Y.; Kiyonaga, M.; Watanabe, T. 1983 Bulletin of Environmental Contamination and Toxicology 31:352-359

Cyclohexane, 1,2,3,4,5,6-hexachloro-, gamma- (8 CI); Cyclohexane, 1,2,3,4,5,6-hexachloro-, (1alpha,2alpha,3beta,4alpha,5alpha,6beta)- (9 CI)
58-89-9
C6-H6-Cl6
MW 290.85, MP gamma-isomer crystals 112.5 C, BP 323.4 C, 176.2 C at 10 mm Hg, VP 0.14 mm Hg at 40 C

Heron, green-backed
BUTORIDES STRIATUS

Tissue	Cases Exposure Route	Range	Mean	General Information
3722 Body	a) 1 b) 5	a) Not detected-0.05 ppm b) Not detected-0.15 ppm Wet wt	a) 0.03 ppm b) 0.04 ppm Wet wt	a) Lake Providence, 11.4% lipids b) Lake Bruin, 12.0% lipids Collected between 6/15-9/25/80. Tertiary consumers, major foods are fish. Lakes acting as sumps. Immature birds are good monitors of contamination. Louisiana GC

BODY; ENVIRONMENTAL EXPOSURE; LOUISIANA; CHLORINE ORGANIC COMPOUNDS; INSECTICIDES; BIOMAGNIFICATION; FISHES; AGRICULTURE; PESTICIDE RESIDUES; AQUATIC; TERRESTRIAL; BIRDS; SNAKES; FROGS; CRAYFISH
Niethammer, K.R.; White, D.H.; Baskett, T.S.; Sayre, M.W. 1984 Archives of Contamination and Tox[illegible] 13:63-74

Heron, little blue
EGRETTA CAERULEA

Tissue	Cases Exposure Route	Range	Mean	General Information
3723 Body	3	Not detected-0.10 ppm Wet wt	0.03 ppm Wet wt	Lake Bruin, 6.0% lipids. Collected 6/15-9/25/80. Tertiary consumer, major foods are small fish and invertebrates. Lakes acting as sumps. Louisiana GC

BODY; ENVIRONMENTAL EXPOSURE; LOUISIANA; CHLORINE ORGANIC COMPOUNDS; INSECTICIDES; BIOMAGNIFICATION; FISHES; AGRICULTURE; PESTICIDE RESIDUES; AQUATIC; TERRESTRIAL; BIRDS; SNAKES; FROGS; CRAYFISH
Niethammer, K.R.; White, D.H.; Baskett, T.S.; Sayre, M.W. 1984 Archives of Contamination and Toxicology 13:63-74

Hobby
FALCO SUBBUTEO

Tissue	Cases Exposure Route	Range	Mean	General Information
372[illegible] Eggs	a) 3 b) 4 Ingestion	a) Not given b) Not given	a) 0.037 ppm b) 0.044 ppm Wet wt	a) Collected 1982 b) 1983. Spain GLC

EGGS; ENVIRONMENTAL EXPOSURE; SPAIN; ADULTS; METAL POISONING; DDE; DDD; DDT; DIELDRIN; HEXACHLOROCYCLOHEXANE; HEPTACHLOR EPOXIDE; ALDRIN; POLYCHLORINATED BIPHENYLS; MERCURY; LEAD; CADMIUM; COPPER; ZINC; BIOACCUMULATION; BIOCONCENTRATION; HEALTH HAZARDS; PESTICIDE RESIDUES; BIRDS; TERRESTRIAL
Gonzales, M.J.; Hernandez, L.M.; Rico, M.C.; Baluja, G. 1984 Journal of Environmental Health and Science

Cyclohexane, 1,2,3,4,5,6-hexachloro-, gamma- (8 CI); Cyclohexane, 1,2,3,4,5,6-hexachloro-, (1alpha,2alpha,3beta,4alpha,5alpha,6beta)- (9 CI)
58-89-9
C6-H6-Cl6
MW 290.85, MP gamma-isomer crystals 112.5 C, BP 323.4 C, 176.2 C at 10 mm Hg, VP 0.14 mm Hg at 40 C

Kite, black
MILVUS MIGRANS

Tissue	Cases Exposure Route	Range	Mean	General Information
3725 Eggs	a) 2 b) 5 c) 4 Ingestion	a) Not given b) Not given c) Not given	a) 0.029 ppm b) 0.143 ppm c) 0.008 ppm Wet wt	a) Collected 1981 b) 1982 c) 1983. Spain GLC

EGGS; ENVIRONMENTAL EXPOSURE; SPAIN; ADULTS; METAL POISONING; DDE; DDD; DDT; DIELDRIN; HEXACHLOROCYCLOHEXANE; HEPTACHLOR EPOXIDE; ALDRIN; POLYCHLORINATED BIPHENYLS; MERCURY; LEAD; CADMIUM; COPPER; ZINC; BIOACCUMULATION; BIOCONCENTRATION; HEALTH HAZARDS; PESTICIDE RESIDUES; BIRDS; TERRESTRIAL

Gonzales, M.J.; Hernandez, L.M.; Rico, M.C.; Baluja, G. 1984 Journal of Environmental Health and Science

Kite, red
MILVUS MILVUS

Tissue	Cases Exposure Route	Range	Mean	General Information
3726 Eggs	a) 4 b) 4 c) 2 Ingestion	a) Not given b) Not given c) Not given	a) 0.007 ppm b) 0.029 ppm c) 0.051 ppm Wet wt	a) Collected 1981 b) 1982 c) 1983 Spain GLC

EGGS; ENVIRONMENTAL EXPOSURE; SPAIN; ADULTS; METAL POISONING; DDE; DDD; DDT; DIELDRIN; HEXACHLOROCYCLOHEXANE; HEPTACHLOR EPOXIDE; ALDRIN; POLYCHLORINATED BIPHENYLS; MERCURY; LEAD; CADMIUM; COPPER; ZINC; BIOACCUMULATION; BIOCONCENTRATION; HEALTH HAZARDS; PESTICIDE RESIDUES; BIRDS; TERRESTRIAL

Gonzales, M.J.; Hernandez, L.M.; Rico, M.C.; Baluja, G. 1984 Journal of Environmental Health and Science

Midge
CHIRONOMIDAE sp.

Tissue	Cases Exposure Route	Range	Mean	General Information
3727 Larvae	Ingestion	Not given	50 ppb	Background level for larvae from fishing store. Belgium

LINDANE; FISHES; BELGIUM; BRAIN; LIVER; LARVAE; WATER POLLUTION; PESTICIDE RESIDUES; INSECTICIDES; AQUATIC; DELIBERATE EXPOSURE; MIDGES; SEX

Marcelle, C.; Thome, J.P. 1984 Bulletin of Environmental Contamination and Toxicology 33:423-429

Cyclohexane, 1,2,3,4,5,6-hexachloro-, gamma- (8 CI); Cyclohexane, 1,2,3,4,5,6-hexachloro-, (1alpha,2alpha,3beta,4alpha,5alpha,6beta)- (9 CI)
58-89-9
C6-H6-Cl6
MW 290.85, MP gamma-isomer crystals 112.5 C, BP 323.4 C, 176.2 C at 10 mm Hg, VP 0.14 mm Hg at 40 C

Oyster, American
CRASSOSTREA VIRGINICA

Tissue	Cases Exposure Route	Range	Mean	General Information
3728 Body	a) 213 b) 138 c) 96 d) 262 e) 379 Ingestion	a) Not detected-0.010 ug/g b) Not detected c) Not detected-trace d) Not detected-0.006 ug/g e) Not detected-0.003 ug/g Wet wt	a) Not detected b) Not detected c) Not detected d) 0.002 ug/g e) Trace Wet wt	a) 1976 b) 1977 c) 1978 d) 1979 e) 1980 Biological monitoring for organochlorine residues in shellfish, 1976-1980. Virtually all values below FDA guidelines or safe levels. DDT metabolites (DDE,DDD) and chlordane decrease after 1976. Maryland, Chesapeake Bay area, tributaries GC-EC

CLAMS; CRABS; SHELLFISH; OYSTERS; MARYLAND; CHESAPEAKE BAY; BIOLOGICAL MONITORING; BIOCONCENTRATION; WATER POLLUTION; FOOD CONTAMINATION; CHLORINE ORGANIC COMPOUNDS; DDD; DDE; POLYCHLORINATED BIPHENYLS; CHLORDANE; DIELDRIN; BHC; AQUATIC; ENVIRONMENTAL EXPOSURE

Eisenberg, M.; Topping, J.J. 1984 Journal of Environmental Science and Health B19(7):673-688

Puffin
FRATERCULA ARCTICA

Tissue	Cases Exposure Route	Range	Mean	General Information
3729 Brain	a) 10 b) 10 c) 10 Ingestion	a) 40-229 ng/g b) 40-540 ng/g c) 17-468 ng/g Fat wt	a) 128+/-62 ng/g b) 327+/-150 ng/g c) 136+/-134 ng/g Fat wt	a) Adults collected at Hernyken, Rost, 7/82 b) Chicks collected at Hernyken, Rost, 7/82 c) Chicks collected at Hernyken, Rost, 7/83 No beta isomer detected. Norway GC
3730 Eggs	16 Ingestion	8-97 ng/g Fat wt	29+/-25 ng/g Fat wt	Collected at Hernyken, Rost, during 5/83. Norway GC
3731 Liver	10 Ingestion	9-89 ng/g Fat wt	40+/-27 ng/g Fat wt	Chicks collected at Hernyken, Rost, 7/83. Adults and chicks collected in 1982 had no detectable levels. Norway GC
3732 Uropygial gland	3 Ingestion	55-95 ng/g Fat wt	72+/-17	Collected at Hernyken, Rost, 7/82. Norway GC

LIVER; BRAIN; UROPYGIAL GLAND; EGGS; WATERFOWL; AQUATIC; ENVIRONMENTAL EXPOSURE; NORWAY; ADULTS; JUVENILES; ALDRIN; DDE; HEXACHLOROBENZENE; POLYCHLORINATED BIPHENYLS; HEXACHLOROCYCLOHEXANE; DIELDRIN; PESTICIDES; BIOACCUMULATION; FOOD CONTAMINATION; WATER POLLUTION; INDUSTRIAL POLLUTION; PESTICIDE RESIDUES

Ingebrigtsen, K.; Skaare, J.U.; Teigen, S.W. 1984 Journal of Toxicology and Environmental Health 14:813-828

Cyclohexane, 1,2,3,4,5,6-hexachloro-, gamma- (8 CI); Cyclohexane, 1,2,3,4,5,6-hexachloro-, (1alpha,2alpha,3beta,4alpha,5alpha,6beta)- (9 CI)
58-89-9
C6-H6-Cl6
MW 290.85, MP gamma-isomer crystals 112.5 C, BP 323.4 C, 176.2 C at 10 mm Hg, VP 0.14 mm Hg at 40 C

Sheep
OVIS sp.

Tissue	Cases Exposure Route	Range	Mean	General Information
3733 Adipose	a) 23 b) 20 c) 18 d) 20 e) 30	a) Not given b) Not given c) Not given d) Not given e) Not given	a) 25 ppb b) 13 ppb c) 9 ppb d) 10 ppb e) 6 ppb	a) Biskra b) Chellala c) El-Eulama d) Souk-Ahras e) Tebessa Region of country in which animal was raised. Tebessa region has no annual insect-control program, other regions do. Algeria GC

ADIPOSE TISSUE; SHEEP; TERRESTRIAL; ENVIRONMENTAL EXPOSURE; ALGERIA; DDT; DDE; HEXACHLOROCYCLOHEXANE; LINDANE; BIOACCUMULATION
Alamir, E.; Venant, A.; Bac, L.R. 1984 Archives of Toxicology Suppl. 7:451-452

Snake, water
NERODIA (NATRIX) RHOMBIFERA

Tissue	Cases Exposure Route	Range	Mean	General Information
3734 Adipose	7	Not given	1.47 ppm	Belle Helene site, collected between 1977 & 79. Residue detected in 7 of 7 snakes. Louisiana, Mississippi River, near Baton Rouge GC-EC

ADIPOSE TISSUE; LIVER; MUSCLES; BODY; SNAKES; AQUATIC; ENVIRONMENTAL EXPOSURE; LOUISIANA; CHLORINE ORGANIC COMPOUNDS; LINDANE; ALDRIN; DIELDRIN; HEPTACHLOR EPOXIDE; HEXACHLOROBENZENE; DDT; DDE; DDE; POLYCHLORINATED BIPHENYLS; FISHES; AGRICULTURE; BIOMAGNIFICATION; BIOCONCENTRATION; PESTICIDE RESIDUES; WATER POLLUTION
Sabourin, T.D.; Stickle, W.B.; Michot, C.E.; Garton, D.W.; Mushinsky, H.R. 1984 Bulletin of Environmental Contamination and Toxicology 32:460-468

Tissue	Cases Exposure Route	Range	Mean	General Information
3735 Body	1	Not detected-0.06 ppm Wet wt	0.02 ppm Wet wt	Lake Bruin, 3.7% lipids. Collected 6/15-9/25/80. Tertiary consumers, major foods are fish and frogs. Lakes acting as sumps. Louisiana GC

BODY; ENVIRONMENTAL EXPOSURE; LOUISIANA; CHLORINE ORGANIC COMPOUNDS; INSECTICIDES; BIOMAGNIFICATION; FISHES; AGRICULTURE; PESTICIDE RESIDUES; AQUATIC; TERRESTRIAL; BIRDS; SNAKES; FROGS; CRAYFISH
Niethammer, K.R.; White, D.H.; Baskett, T.S.; Sayre, M.W. 1984 Archives of Contamination and Toxicology 13:63-74

Cyclohexane, 1,2,3,4,5,6-hexachloro-, gamma- (8 CI); Cyclohexane, 1,2,3,4,5,6-hexachloro-, (1alpha,2alpha,3beta,4alpha,5alpha,6beta)- (9 CI)
58-89-9
C6-H6-Cl6
MW 290.85, MP gamma-isomer crystals 112.5 C, BP 323.4 C, 176.2 C at 10 mm Hg, VP 0.14 mm Hg at 40 C
Tilapia
TILAPIA sp

Tissue	Cases Exposure Route	Range	Mean	General Information
3736 Muscle	Ingestion	a) 1.9-12.2 ug/L b) 1.2-15.9 ug/L c) 5.0-12.5 ug/L d) 8.0-12.7 ug/L e) 3.7-15.9 ug/L f) 4.2-14.9 ug/L g) 0.6-16.1 ug/L h) 12.5-18.6 ug/L	a) 5.5 ug/L b) 7.2 ug/L c) 8.9 ug/L d) 10.7 ug/L e) 8.1 ug/L f) 10.1 ug/L g) 6.4 ug/L h) 14.4 ug/L	a) Aswan b) Assiut c) Cairo d) El-Mansora e) Paraskour f) Edfina g) El-Mahmodia canal h) Abo El-Gheit canal 80 composite samples, approx 5 fish each. Sites a) near Lake Nassar, e), f) near Mediterranean Sea on the Nile river, g), h) in agricultural areas polluted with pesticides (application, leachates). Egypt, Nile River and canals GC-EC

PESTICIDE RESIDUES; FISHES; MUSCLES; EGYPT; AQUATIC; CHLORINE ORGANIC COMPOUNDS; DDT; DDE; BIOLOGICAL MONITORING; WATER POLLUTION; METABOLITES; LINDANE; INSECTICIDES; ENVIRONMENTAL EXPOSURE; HEXACHLOROCYCLOHEXANE
Aly, O.A.; Badawy, M.I. 1984 Bulletin of Environmental Contamination and Toxicology 33:246-252

Cyclopenta(c)furo(3',2':4,5)furo(2,3-h)(1)benzopyran-1,11-dione, 2,3,6a,8,9,9a-hexahydro-9a-hydroxy-4-methoxy-
6885-57-0
C17-H14-O7
MP 293 C (decomp)
Chicken
GALLUS sp.

Tissue	Cases Exposure Route	Range	Mean	General Information
3737 Gizzard	6 Ingestion	0.0-0.031 ug/kg	0.08 ug/kg	3 hr after end of 5 wk of feed with 2057 ug B-1 and 1323 ug B-2/kg. Undetected on d 1, 2 and 4. Undetected in controls (same feed without aflatoxins) 1 wk old Hubbard White Mountain Broilers.
3738 Heart	6 Ingestion	Not given	0.19 ug/kg	Pooled sample, 3 hr after end of 5 wk of feed with 2057 ug B-1 and 1323 ug B-2/kg. Undetected on d 1, 2 and 4. Undetected in controls (same feed without aflatoxins) 1 wk old Hubbard White Mountain Broilers.
3739 Kidney	a) 6 b) 6 Ingestion	a) Not given b) Not given	a) 2.07 ug/kg b) 0.16 ug/kg	a) Pooled sample, 3 hr after end of 5 wk of feed with 2057 ug B-1 and 1323 ug B-2/kg b) 1 d later. Undetected by d 2. Undetected in controls (same feed without aflatoxins) 1 wk old Hubbard White Mountain Broilers.

(next page)

Cyclopenta(c)furo(3',2':4,5)furo(2,3-h)(1)benzopyran-1,11-dione, 2,3,6a,8,9,9a-hexahydro-9a-hydroxy-4-methoxy-
6885-57-0
C17-H14-O7
MP 293 C (decomp)

Chicken
GALLUS sp.

(continued)

Tissue	Cases Exposure Route	Range	Mean	General Information
3740 Liver	a) 6 b) 6 c) 6 Ingestion	a) 0.64-6.55 ug/kg b) 0.06-0.77 ug/kg c) 0.0-0.18 ug/kg	a) 2.27 ug/kg b) 0.38 ug/kg c) 0.07 ug/kg	a) 3 hr after end of 5 wk of feed with 2057 ug B-1 and 1323 ug B-2/kg b) 1 d later c) 2 d later Undetected on d 4. Undetected in controls (same feed without aflatoxins) 1 wk old Hubbard White Mountain Broilers.
3741 Muscle	a) 6 b) 6 c) 6 d) 6 e) 6 Ingestion	a) 0.0-<0.02 ug/kg b) 0.0-0.08 ug/kg c) 0.0-<0.02 ug/kg d) Not detected e) 0.0-0.03 ug/kg	a) <0.02 ug/kg b) 0.02 ug/kg c) <0.02 ug/kg d) Not detected e) <0.02 ug/kg	a) Leg muscle. 3 hr after withdrawal of feed b) 1 d later c) Breast muscle. 3 hr after withdrawal of feed d) 1 d later e) 2 d later Fed 2057 ug aflatoxin B-1 and 1323 ug B-2/kg for 5 wk. Undetected in leg muscle d 2, breast muscle d 4. Undetected in controls (same feed without aflatoxins). 1 wk old Hubbard White Mountain Broilers.

GIZZARD; KIDNEYS; HEART; MUSCLES; LIVER; CHICKENS; DELIBERATE EXPOSURE; AFLATOXINS; ANIMAL FEEDS; FOOD CONTAMINATION
Chen, C.; Pearson, A.M.; Coleman, T.H.; Gray, J.I.; Pestka, J.J.; Aust, S.D. 1984 Food and Chemical Toxicology 22(6):447-451

Cyclopenta(c)furo(3',2':4,5)furo(2,3-h)(1)benzopyran-1,11-dione, 2,3,6a,9a-tetrahydro-9a-hydroxy-4-methoxy-, (6aR-cis)-
6795-23-9
C17-H12-O7
MW 328.3, MP 299 C (decomp)

Cattle
BOS sp.

Tissue	Cases Exposure Route	Range	Mean	General Information
3742 Bile	5 Ingestion	Not given	3.46 ng/ml	800 ng/g aflatoxin contaminated corn in diet for 17.5 wk. Holstein X Friesian steers, mean wt 183 kg. TLC; HPLC
3743 Blood	15 Ingestion	a) Not given b) Not given c) Not given d) Not given e) Not given	a) 0.37 ng/ml b) 0.30 ng/ml c) 0.38 ng/ml d) 0.26 ng/ml e) 0.38 ng/ml	a) 4 wk, Group II b) 11 wk, Group II c) 15 wk, Group II d) 4 wk, Group III e) 15 wk, Group III Group I, controls, not detected Group II, 800 ng/g aflatoxin contaminated corn in diet for 17.5 wk. Group III, 800 ng/g aflatoxin contaminated corn in diet for 15 wk and aflatoxin free diet for 2.5 wk. Holstein X Friesian steers, mean wt 183 kg. TLC; HPLC
3744 Heart	5 Ingestion	Not given	0.14 ng/g	800 ng/g aflatoxin contaminated corn in diet for 17.5 wk. Holstein X Friesian steers, mean wt 183 kg. TLC; HPLC

(next page)

Cyclopenta(c)furo(3',2':4,5)furo(2,3-h)(1)benzopyran-1,11-dione, 2,3,6a,9a-tetrahydro-9a-hydroxy-4-methoxy-, (6aR-cis)-
6795-23-9
C17-H12-O7
MW 328.3, MP 299 C (decomp)

Cattle
BOS sp.

(continued)

Tissue	Cases Exposure Route	Range	Mean	General Information
3745 Kidney	5 Ingestion	Not given	4.82 ng/g	800 ng/g aflatoxin contaminated corn in diet for 17.5 wk. Holstein X Friesian steers, mean wt 183 kg. TLC; HPLC
3746 Liver	5 Ingestion	Not given	1.07 ng/g	800 ng/g aflatoxin contaminated corn in diet for 17.5 wk. Holstein X Friesian steers, mean wt 183 kg. TLC; HPLC
3747 Lung	5 Ingestion	Not given	0.29 ng/g	800 ng/g aflatoxin contaminated corn in diet for 17.5 wk. Holstein X Friesian steers, mean wt 183 kg. TLC; HPLC

HEART; KIDNEYS; LIVER; LUNGS; MUSCULOSKELETAL SYSTEM; PANCREAS; URINE; RUMEN; CATTLE; AFLATOXINS; ADULTS; BILE; BIOACCUMULATION; DIETS; TERRESTRIAL; DELIBERATE EXPOSURE
Richard, J.L.; Pier, A.C.; Stubblefield, R.D.; Shotwell, O.L.; Lyon, R.L.; Cutlip, R.C. 1983 American Journal of Veterinary Research 44(7):1294-1299

Tissue	Cases Exposure Route	Range	Mean	General Information
3748 Milk	a) 1 b) 1 c) 1 Ingestion	a) Not given b) Not given c) Not given	a) 2.2 ug/L b) 1.9 ug/L c) 2.2 ug/L	a) Fed 5.4 mg aflatoxin B1/d b) 5.8 mg/d c) 5.8 mg/d Cows produced 15.5, 14.9, 18.4 kg milk/d. Conversion of ingested aflatoxin B1 to M1 was 0.6% (in milk). South Carolina Calves consuming contaminated milk (low levels of aflatoxin M1) did not have aflatoxicosis. Calves delivered by a) had foot defects, died of salmonellosis at 8 wk of age, b) & c) aborted at 70 d before parturition. Necropsies of cows showed: aflatoxicosis, fatty infiltration of liver cells, bile duct hyperplasia and proliferation.

AFLATOXINS; CATTLE; MILK; METABOLISM; METABOLITES; DIETS; SOUTH CAROLINA; TERRESTRIAL; DELIBERATE EXPOSURE; LACTATION; FOOD CONTAMINATION
van Dijk, H.J.; O'Dell, G.D.; Bodine, A.B. 1984 American Journal of Veterinary Research 45(10):1994-1997

Tissue	Cases Exposure Route	Range	Mean	General Information
3749 Muscle	5 Ingestion	a) Not given b) Not given	a) 0.11 ng/g b) 0.10 ng/g	a) Semi-tendonous skeletal muscle b) Iliopsoas skeletal muscle 800 ng/g aflatoxin-contaminated corn in diet for 17.5 wk. Holstein X Friesian steers, mean wt 183 kg. TLC; HPLC

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Cyclopenta(c)furo(3',2':4,5)furo(2,3-h)(1)benzopyran-1,11-dione, 2,3,6a,9a-tetrahydro-9a-hydroxy-4-methoxy-, (6aR-cis)-
6795-23-9
C17-H12-O7
MW 328.3, MP 299 C (decomp)

Cattle
BOS sp.

(continued)

Tissue	Cases Exposure Route	Range	Mean	General Information
3750 Pancreas	5 Ingestion	Not given	0.15 ng/g	800 ng/g aflatoxin contaminated corn in diet for 17.5 wk. Holstein X Friesian steers, mean wt 183 kg. TLC; HPLC
3751 Urine	15 Ingestion	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given	a) 30.02 ng/ml b) 10.91 ng/ml c) 16.18 ng/ml d) 5.60 ng/ml e) 12.10 ng/ml f) Not detected	a) 5 wk, Group II b) 15 wk, Group II c) 17.5 wk, Group II d) 5 wk, Group III e) 15 wk, Group III f) 17.5 wk, Group III Group I, controls, not detected. Group II, 800 ng/g aflatoxin contaminated corn in diet for 17.5 wk. Group III, 800 ng/g aflatoxin contaminated corn in diet for 15 wk and aflatoxin free diet for 2.5 wk. Holstein X Friesian steers, mean wt 183 kg. TLC; HPLC

HEART; KIDNEYS; LIVER; LUNGS; MUSCULOSKELETAL SYSTEM; PANCREAS; URINE; RUMEN; CATTLE; AFLATOXINS; ADULTS; BILE; BIOACCUMULATION; DIETS; TERRESTRIAL; DELIBERATE EXPOSURE

Richard, J.L.; Pier, A.C.; Stubblefield, R.D.; Shotwell, O.L.; Lyon, R.L.; Cutlip, R.C. 1983 American Journal of Veterinary Research 44(7):1294-1299

Chicken
GALLUS sp.

Tissue	Cases Exposure Route	Range	Mean	General Information
3752 Gizzard	a) 6 b) 6 Ingestion	a) 0.0-0.03 ug/kg b) 0.0-0.02 ug/kg	a) <0.02 ug/kg b) <0.02 ug/kg	a) 3 hr after end of 5 wk of feed with 2057 ug B-1 and 1323 ug B-2/kg b) 1 d later Undetected on d 2 and 4. Undetected in controls (same feed without aflatoxins) 1 wk old Hubbard White Mountain Broilers.
3753 Kidney	6 Ingestion	Not given	0.10 ug/kg	Pooled sample, 3 hr after end of 5 wk of feed with 2057 ug B-1 and 1323 ug B-2/kg. Undetected on d 1, 2 and 4. Undetected in controls (same feed without aflatoxins) 1 wk old Hubbard White Mountain Broilers.
3754 Liver	a) 6 b) 6 Ingestion	a) Not given b) Not given	a) 0.06 ug/kg b) 0.04 ug/kg	a) 3 hr after end of 5 wk of feed with 2057 ug B-1 and 1323 ug B-2/kg b) 1 d later Undetected on d 2 and 4. Undetected in controls (same feed without aflatoxins) 1 wk old Hubbard White Mountain Broilers.

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Cyclopenta(c)furo(3',2':4,5)furo(2,3-h)(1)benzopyran-1,11-dione, 2,3,6a,9a-tetrahydro-9a-hydroxy-4-methoxy-, (6aR-cis)-
6795-23-9
C17-H12-O7
MW 328.3, MP 299 C (decomp)

Chicken
GALLUS sp.

(continued)

Tissue	Cases Exposure Route	Range	Mean	General Information
8755 Muscle	a) 6 b) 6 Ingestion	a) <0.02-0.06 ug/kg b) 0.0-0.05 ug/kg	a) 0.02 ug/kg b) 0.02 ug/kg	a) Leg muscle. 3 hr after withdrawal of feed b) Breast muscle. 3 hr after withdrawal of feed Fed 2057 ug aflatoxin B-1 and 1323 ug B-2/kg for 5 wk. Undetected on d 1, 2 and 4. Undetected in controls (same feed without aflatoxins). 1 wk old Hubbard White Mountain Broilers.
GIZZARD; KIDNEYS; HEART; MUSCLES; LIVER; CHICKENS; DELIBERATE EXPOSURE; AFLATOXINS; ANIMAL FEEDS; FOOD CONTAMINATION				
Chen, C.; Pearson, A.M.; Coleman, T.H.; Gray, J.I.; Pestka, J.J.; Aust, S.D. 1984 Food and Chemical Toxicology 22(6):447-451				

Turkey
MELEAGRIS

Tissue	Cases Exposure Route	Range	Mean	General Information
8756 Liver	12 Ingestion	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given	a) 0.096+/-0.004 ng/g b) 0.051+/-0.026 ng/g c) 0.066+/-0.028 ng/g d) 0.162+/-0.030 ng/g e) 0.049+/-0.005 ng/g f) 0.114+/-0.018 ng/g S.E.	a) Free B-1, diet supplemented with 0.2 ppm Se b) Conjugated B-1, 0.2 ppm Se c) Free B-1, 2.0 ppm Se d) Conjugated B-1, 2.0 ppm Se e) Free B-1, 4.0 ppm Se f) Conjugated B-1, 4.0 ppm Se 18 day diet of 500 ng aflatoxin B-1/g feed. Significant difference, b) and d). Month-old male Large Whites. Georgia HPLC
LIVER; TERRESTRIAL; TURKEYS; DELIBERATE EXPOSURE; GEORGIA; AFLATOXINS; FOOD CONTAMINATION; COMPARATIVE EVALUATIONS				
Gregory, J.F. III; Edds, G.T. 1984 Food and Chemical Toxicology 22(8):637-642				

Cyclopenta(c)furo(3',2':4,5)furo(2,3-h)(1)benzopyran-1,11-dione, 2,3,6aalpha,8,9,9aalpha-hexahydro-4-methoxy- (8 CI); Cyclopenta(c)furo(3',2':4,5)furo(2,3-h)(1)benzopyran-1,11-dione, 2,3,6a,8,9,9a-hexahydro-4-methoxy-, (6aR-cis)- (9 CI)

7220-81-7
C17-H14-O6
MW 314.08, MP 286-289 C

Chicken
GALLUS sp.

Tissue	Cases Exposure Route	Range	Mean	General Information
3757 Gizzard	a) 6 b) 6 Ingestion	a) 0.07-0.33 ug/kg b) <0.02-0.06 ug/kg	a) 0.19 ug/kg b) 0.03 ug/kg	a) 3 hr after end of 5 wk of feed with 2057 ug B-1 and 1323 ug B-2/kg. Probable contamination from feed in gizzard b) 1 d later Undetected on d 2 and 4. Undetected in controls (same feed without aflatoxins) 1 wk old Hubbard White Mountain Broilers.
3758 Heart	6 Ingestion	Not given	0.06 ug/kg	Pooled sample, 3 hr after end of 5 wk of feed with 2057 ug B-1 and 1323 ug B-2/kg. Undetected on d 1, 2 and 4. Undetected in controls (same feed without aflatoxins) 1 wk old Hubbard White Mountain Broilers.
3759 Kidney	a) 6 b) 6 Ingestion	a) Not given b) Not given	a) 0.05 ug/kg b) 0.03 ug/kg	a) Pooled sample, 3 hr after end of 5 wk of feed with 2057 ug B-1 and 1323 ug B-2/kg b) 1 d later Undetected by d 2. Undetected in controls (same feed without aflatoxins) 1 wk old Hubbard White Mountain Broilers.
3760 Liver	a) 6 b) 6 c) 6 Ingestion	a) 0.03-0.13 ug/kg b) <0.02-0.15 ug/kg c) 0.0-0.03 ug/kg	a) 0.10 ug/kg b) 0.05 ug/kg c) <0.02 ug/kg	a) 3 hr after end of 5 wk of feed with 2057 ug B-1 and 1323 ug B-2/kg b) 1 d later c) 2 d later Undetected on d 4. Undetected in controls (same feed without aflatoxins) 1 wk old Hubbard White Mountain Broilers.
3761 Muscle	a) 6 b) 6 c) 6 d) 6 e) 6 Ingestion	a) 0.0-0.02 ug/kg b) 0.0-0.06 ug/kg c) 0.0-0.05 ug/kg d) 0.0-0.05 ug/kg e) 0.0-0.03 ug/kg	a) 0.02 ug/kg b) <0.02 ug/kg c) 0.03 ug/kg d) 0.0 ug/kg e) <0.02 ug/kg	a) Leg muscle. 3 hr after withdrawal of feed b) 1 d later c) Breast muscle. 3 hr after withdrawal of feed d) 1 d later e) 2 d later Fed 2057 ug aflatoxin B-1 and 1323 ug B-2/kg for 5 wk. Undetected in leg muscle d 2, breast muscle d 4. Undetected in controls (same feed without aflatoxins). 1 wk old Hubbard White Mountain Broilers.

GIZZARD; KIDNEYS; HEART; MUSCLES; LIVER; CHICKENS; DELIBERATE EXPOSURE; AFLATOXINS; ANIMAL FEEDS; FOOD CONTAMINATION

Chen, C.; Pearson, A.M.; Coleman, T.H.; Gray, J.I.; Pestka, J.J.; Aust, S.D. 1984 Food and Chemical Toxicology 22(6):447-451

Cyclopenta(c)furo(3',2':4,5)furo(2,3-h)(1)benzopyran-1,11-dione, 2,3,6aalpha,9aalpha-tetrahydro-4-methoxy- (8 CI) Cyclopenta(c)furo(3',2':4,5)furo(2,3-h)(1)benzopyran-1,11-dione, 2,3,6a,9a-tetrahydro-4-methoxy-, (6aR-cis)- (9 CI)
1162-65-8
C17-H12-O6
MW 312.3, MP 268-269 C
Cattle
BOS sp.

Tissue	Cases Exposure Route	Range	Mean	General Information
3762 Bile	5 Ingestion	Not given	0.23 ng/ml	800 ng/g aflatoxin-contaminated corn in diet for 17.5 wk. Holstein X Friesian steers, mean wt 183 kg. TLC; HPLC
3763 Heart	5 Ingestion	Not given	0.14 ng/g	800 ng/g aflatoxin-contaminated corn in diet for 17.5 wk. Holstein X Friesian steers, mean wt 183 kg. TLC; HPLC
3764 Kidney	5 Ingestion	Not given	0.09 ng/g	800 ng/g aflatoxin-contaminated corn in diet for 17.5 wk. Holstein X Friesian steers, mean wt 183 kg. TLC; HPLC
3765 Liver	5 Ingestion	Not given	0.37 ng/g	800 ng/g aflatoxin-contaminated corn in diet for 17.5 wk. Holstein X Friesian steers, mean wt 183 kg. TLC; HPLC
3766 Lung	5 Ingestion	Not given	0.014 ng/g	800 ng/g aflatoxin-contaminated corn in diet for 17.5 wk. Holstein X Friesian steers, mean wt 183 kg. TLC; HPLC
3767 Muscle	5 Ingestion	Not given	0.002 ng/g	800 ng/g aflatoxin-contaminated corn in diet for 17.5 wk. Holstein X Friesian steers, mean wt 183 kg. TLC; HPLC
3768 Urine	15 Injection	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given	a) 1.54 ng/ml b) 0.80 ng/ml c) 1.18 ng/ml d) 0.56 ng/ml e) 2.75 ng/ml f) Not detected	a) 5 wk, Group II b) 15 wk, Group II c) 17.5 wk, Group II d) 5 wk, Group III e) 15 wk, Group III f) 17.5 wk, Group III Group I, controls, not detected. Group II, 800 ng/g aflatoxin-contaminated corn in diet for 17.5 wk. Group III, 800 ng/g aflatoxin-contaminated corn in diet for 15 wk, aflatoxin-free diet for 2.5 wk. Holstein X Friesian steers, mean wt 183 kg. TLC; HPLC

HEART; KIDNEYS; LIVER; LUNGS; MUSCULOSKELETAL SYSTEM; PANCREAS; URINE; RUMEN; CATTLE; AFLATOXINS; ADULTS; BILE; BIOACCUMULATION; DIETS; TERRESTRIAL; DELIBERATE EXPOSURE

Richard, J.L.; Pier, A.C.; Stubblefield, R.D.; Shotwell, O.L.; Lyon, R.L.; Cutlip, R.C. 1983 American Journal of Veterinary Research 44(7):1294-1299

Cyclopenta(c)furo(3',2':4,5)furo(2,3-h)(1)benzopyran-1,11-dione, 2,3,6aalpha,9aalpha-tetrahydro-4-methoxy- (8 CI) Cyclopenta(c)furo(3',2':4,5)furo(2,3-h)(1)benzopyran-1,11-dione, 2,3,6a,9a-tetrahydro-4-methoxy-, (6aR-cis)- (9 CI)

1162-65-8
C17-H12-O6
MW 312.3, MP 268-269 C

Chicken
GALLUS sp.

Tissue	Cases Exposure Route	Range	Mean	General Information
3769 Gizzard	a) 6 b) 6 Ingestion	a) 0.11-0.50 ug/kg b) <0.02-0.39 ug/kg	a) 0.26 ug/kg b) 0.09 ug/kg	a) 3 hr after end of 5 wk of feed with 2057 ug B-1 and 1323 ug B-2/kg. Probable contamination from feed in gizzard b) 1 d later Undetected on d 2 and 4. Undetected in controls (same feed without aflatoxins) 1 wk old Hubbard White Mountain Broilers.
3770 Heart	6 Ingestion	Not given	0.08 ug/kg	Pooled sample, 3 hr after end of 5 wk of feed with 2057 ug B-1 and 1323 ug B-2/kg. Undetected on d 1, 2 and 4. Undetected in controls (same feed without aflatoxins) 1 wk old Hubbard White Mountain Broilers.
3771 Kidney	6 Ingestion	Not given	0.05 ug/kg	Pooled sample, 3 hr after end of 5 wk of feed with 2057 ug B-1 and 1323 ug B-2/kg. Undetected on d 1, 2, and 4. Undetected in controls (same feed without aflatoxins) 1 wk old Hubbard White Mountain Broilers.
3772 Liver	a) 6 b) 6 Ingestion	a) Not given b) Not given	a) 0.17 ug/kg b) 0.10 ug/kg	a) 3 hr after end of 5 wk of feed with 2057 ug B-1 and 1323 ug B-2/kg b) 1 d later Undetected on d 2 and 4. Undetected in controls (same feed without aflatoxins) 1 wk old Hubbard White Mountain Broilers.
3773 Muscle	a) 6 b) 6 c) 6 d) 6 Ingestion	a) 0.05-0.16 ug/kg b) 0.03-0.07 ug/kg c) 0.0-0.08 ug/kg d) 0.0-0.06 ug/kg	a) 0.09 ug/kg b) 0.04 ug/kg c) 0.04 ug/kg d) 0.02 ug/kg	a) Leg muscle. 3 hr after withdrawal of feed b) 1 d later c) Breast muscle. 3 hr after withdrawal of feed d) 1 d later Fed 2057 ug aflatoxin B-1 and 1323 ug B-2/kg for 5 wk. Undetected on d 2 and 4. Undetected in controls (same feed without aflatoxins). 1 wk old Hubbard White Mountain Broilers.

GIZZARD; KIDNEYS; HEART; MUSCLES; LIVER; CHICKENS; DELIBERATE EXPOSURE; AFLATOXINS; ANIMAL FEEDS; FOOD CONTAMINATION

Chen, C.; Pearson, A.M.; Coleman, T.H.; Gray, J.I.; Pestka, J.J.; Aust, S.D. 1984 Food and Chemical Toxicology 22(6):447-451

Cyclopenta(c)furo(3',2':4,5)furo(2,3-h)(1)benzopyran-1,11-dione, 2,3,6aalpha,9aalpha-tetrahydro-4-methoxy- (8 CI) Cyclopenta(c)furo(3',2':4,5)furo(2,3-h)(1)benzopyran-1,11-dione, 2,3,6a,9a-tetrahydro-4-methoxy-, (6aR-cis)- (9 CI)
1162-65-8
C17-H12-O6
MW 312.3, MP 268-269 C

Turkey
MELEAGRIS

Tissue	Cases Exposure Route	Range	Mean	General Information
3774 Liver	12 Ingestion	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given	a) 0.211+/-0.075 ng/g b) 0.023+/-0.003 ng/g c) 0.092+/-0.015 ng/g d) 0.088+/-0.022 ng/g e) 0.040+/-0.007 ng/g f) 0.068+/-0.034 ng/g S.E.	a) Free B-1, diet supplemented with 0.2 ppm Se b) Conjugated B-1, 0.2 ppm Se c) Free B-1, 2.0 ppm Se d) Conjugated B-1, 2.0 ppm Se e) Free B-1, 4.0 ppm Se f) Conjugated B-1, 4.0 ppm Se 18 day diet of 500 ng aflatoxin B-1/g feed. Significant difference, a) from c) and e). Month-old male Large Whites. Georgia HPLC
LIVER; TERRESTRIAL; TURKEYS; DELIBERATE EXPOSURE; GEORGIA; AFLATOXINS; FOOD CONTAMINATION; COMPARATIVE EVALUATIONS				
Gregory, J.F. III; Edds, G.T. 1984 Food and Chemical Toxicology 22(8):637-642				

Cyclopropanecarboxylic acid, 2,2-dimethyl-3-(2-methylpropenyl)-, (5-benzyl-3-furyl)methyl ester (8 CI); Cyclopropanecarboxylic acid, 2,2-dimethyl-3-(2-methyl-1-propenyl)-, (5-(phenylmethyl)-3-furanyl)methyl ester (9 CI)
10453-86-8
C22-H26-O3
MW 338.48, MP 48 C, BP 170-175 C at 0.02 mm Hg

Cattle
BOS sp.

Tissue	Cases Exposure Route	Range	Mean	General Information
3775 Adipose	4 Ingestion	a) Not given b) Not given c) Not given d) Not given	a) 0.4 ppm b) 0.10 ppm c) 0.6 ppm d) 1.7 ppm	a) Acid, trans-isomer b) Acid, cis-isomer c) Alcohol, trans-isomer d) Alcohol, cis-isomer Parent equivalents 48 hr after 10 mg/kg administered as trans or cis isomers of acid or alcohol moieties. Extensive metabolite breakdown given. Included renal, omental, and subcutaneous tissues. Texas TLC; Scintillation counting
3776 Blood	4 Ingestion	a) Not given b) Not given c) Not given d) Not given	a) 0.9 ppm b) <0.1 ppm c) 3.2 ppm d) 0.5 ppm	a) Acid, trans-isomer b) Acid, cis-isomer c) Alcohol, trans-isomer d) Alcohol, cis-isomer Parent equivalents 48 hr after 10 mg/kg administered as trans or cis isomers of acid or alcohol moieties. Texas TLC; Scintillation counting

(next page)

Cyclopropanecarboxylic acid, 2,2-dimethyl-3-(2-methylpropenyl)-, (5-benzyl-3-furyl)methyl ester (8 CI); Cyclopropanecarboxylic acid, 2,2-dimethyl-3-(2-methyl-1-propenyl)-, (5-(phenylmethyl)-3-furanyl)methyl ester (9 CI)
10453-86-8
C22-H26-O3
MW 338.48, MP 48 C, BP 170-175 C at 0.02 mm Hg

Cattle
BOS sp.

(continued)

Tissue	Cases Exposure Route	Range	Mean	General Information
3777 Brain	4 Ingestion	a) Not given b) Not given c) Not given d) Not given	a) <0.1 ppm b) 0.1 ppm c) 0.3 ppm d) <0.1 ppm	a) Acid, trans-isomer b) Acid, cis-isomer c) Alcohol, trans-isomer d) Alcohol, cis-isomer Parent equivalents 48 hr after 10 mg/kg administered as trans or cis isomers of acid or alcohol moieties. Texas TLC; Scintillation counting
3778 Heart	4 Ingestion	a) Not given b) Not given c) Not given d) Not given	a) 0.4 ppm b) 0.1 ppm c) 0.5 ppm d) 0.2 ppm	a) Acid, trans-isomer b) Acid, cis-isomer c) Alcohol, trans-isomer d) Alcohol, cis-isomer Parent equivalents 48 hr after 10 mg/kg administered as trans or cis isomers of acid or alcohol moieties. Texas TLC; Scintillation counting
3779 Kidney	4 Ingestion	a) Not given b) Not given c) Not given d) Not given	a) 2.6 ppm b) 0.9 ppm c) 2.4 ppm d) 1.4 ppm	a) Acid, trans-isomer b) Acid, cis-isomer c) Alcohol, trans-isomer d) Alcohol, cis-isomer Parent equivalents 48 hr after 10 mg/kg administered as trans or cis isomers of acid or alcohol moieties. Extensive metabolite breakdown given. Texas TLC; Scintillation counting
3780 Liver	4 Ingestion	a) Not given b) Not given c) Not given d) Not given	a) 1.4 ppm b) 2.6 ppm c) 1.9 ppm d) 3.4 ppm	a) Acid, trans-isomer b) Acid, cis-isomer c) Alcohol, trans-isomer d) Alcohol, cis-isomer Parent equivalents 48 hr after 10 mg/kg administered as trans or cis isomers of acid or alcohol moieties. Extensive metabolite breakdown given. Texas TLC; Scintillation counting
3781 Lung	4 Ingestion	a) Not given b) Not given c) Not given d) Not given	a) 0.3 ppm b) 0.2 ppm c) 0.9 ppm d) 0.3 ppm	a) Acid, trans-isomer b) Acid, cis-isomer c) Alcohol, trans-isomer d) Alcohol, cis-isomer Parent equivalents 48 hr after 10 mg/kg administered as trans or cis isomers of acid or alcohol moieties. Texas TLC; Scintillation counting

(next page)

Cyclopropanecarboxylic acid, 2,2-dimethyl-3-(2-methylpropenyl)-, (5-benzyl-3-furyl)methyl ester (8 CI); Cyclopropanecarboxylic acid, 2,2-dimethyl-3-(2-methyl-1-propenyl)-, (5-(phenylmethyl)-3-furanyl)methyl ester (9 CI)
10453-86-8
C22-H26-O3
MW 338.45, MP 48 C, BP 170-175 C at 0.02 mm Hg

Cattle
BOS sp.

(continued)

Tissue	Cases Exposure Route	Range	Mean	General Information
3782 Milk	4 Ingestion	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given g) Not given h) Not given	a) 0.107% b) 0.092% c) 0.055% d) 0.190% e) 56% f) 43% g) 39% h) 42%	a) % dose, acid, trans-isomer, total radioactivity b) Cis-isomer c) Alcohol, trans-isomer d) Cis-isomer e) % radiocarbon as parent, acid, trans-isomer f) Cis-isomer g) Alcohol, trans-isomer h) Cis-isomer Dose 10 mg/kg as trans or cis isomers of acid or alcohol moieties. 48 hr recovery. Other metabolites measured. Texas HPLC
3783 Muscle	4 Ingestion	a) Not given b) Not given c) Not given d) Not given	a) 0.1 ppm b) 0.3 ppm c) 0.4 ppm d) 0.1 ppm	a) Acid, trans-isomer b) Acid, cis-isomer c) Alcohol, trans-isomer d) Alcohol, cis-isomer Parent equivalents 48 hr after 10 mg/kg administered as trans or cis isomers of acid or alcohol moieties. Included leg and longissimus dorsi tissues. Texas TLC: Scintillation counting
3784 Ovary	4 Ingestion	a) Not given b) Not given c) Not given d) Not given	a) 0.5 ppm b) 0.1 ppm c) 1.8 ppm d) 0.2 ppm	a) Acid, trans-isomer b) Acid, cis-isomer c) Alcohol, trans-isomer d) Alcohol, cis-isomer Parent equivalents 48 hr after 10 mg/kg administered as trans or cis isomers of acid or alcohol moieties. Texas TLC; Scintillation counting
3785 Spleen	4 Ingestion	a) Not given b) Not given c) Not given d) Not given	a) 0.1 ppm b) 0.1 ppm c) 0.4 ppm d) 0.2 ppm	a) Acid, trans-isomer b) Acid, cis-isomer c) Alcohol, trans-isomer d) Alcohol, cis-isomer Parent equivalents 48 hr after 10 mg/kg administered as trans or cis isomers of acid or alcohol moieties. Texas TLC; Scintillation counting

(next page)

Cyclopropanecarboxylic acid, 2,2-dimethyl-3-(2-methylpropenyl)-, (5-benzyl-3-furyl)methyl ester (8 CI); Cyclopropanecarboxylic acid, 2,2-dimethyl-3-(2-methyl-1-propenyl)-, (5-(phenylmethyl)-3-furanyl)methyl ester (9 CI)
10453-86-8
C22-H26-O3
MW 338.48, MP 48 C, BP 170-175 C at 0.02 mm Hg

Cattle
BOS sp.

(continued)

Tissue	Cases Exposure Route	Range	Mean	General Information
3786 Tongue	4 Ingestion	a) Not given b) Not given c) Not given d) Not given	a) 0.3 ppm b) 0.1 ppm c) 0.5 ppm d) 0.2 ppm	a) Acid, trans-isomer b) Acid, cis-isomer c) Alcohol, trans-isomer d) Alcohol, cis-isomer Parent equivalents 48 hr after 10 mg/kg administered as trans or cis isomers of acid or alcohol moieties. Texas TLC; Scintillation counting
3787 Udder	4 Ingestion	a) Not given b) Not given c) Not given d) Not given	a) 0.1 ppm b) 0.3 ppm c) 0.8 ppm d) 0.3 ppm	a) Acid, trans-isomer b) Acid, cis-isomer c) Alcohol, trans-isomer d) Alcohol, cis-isomer Parent equivalents 48 hr after 10 mg/kg administered as trans or cis isomers of acid or alcohol moieties. Texas TLC; Scintillation counting
3788 Urine	4 Ingestion	a) Not given b) Not given c) Not given d) Not given	a) 34.4% b) 20.9% c) 30.7% d) 21.9%	a) Acid, trans-isomer b) Acid, cis-isomer c) Alcohol, trans-isomer d) Alcohol, cis-isomer % 10 mg/kg dose recovered as total radioactivity in 48 hr. Dose administered as cis or trans isomers of acid or alcohol moieties. Extensive metabolite breakdown given. Texas TLC; Scintillation counting

URINE; MILK; KIDNEYS; LIVER; BRAIN; OVARIES; TONGUE; SPLEEN; LUNGS; MUSCLES; ADIPOSE TISSUE; BLOOD; INSECTICIDES; ENVIRONMENTAL EXPOSURE; CATTLE; TEXAS; BIOACCUMULATION; LACTATION; METABOLITES; RADIONUCLIDES; TERRESTRIAL

Ridlen, R.L.; Christopher, R.J.; Ivie, G.W.; Beier, R.C.; Camp, B.J. 1984 Journal of Agricultural and Food Chemistry 32:1211-1217

Cyclopropanecarboxylic acid, 3-(2,2-dichloroethenyl)-2,2-dimethyl-, (3-phenoxyphenyl)methyl ester
52645-53-1
C21-H20-Cl2-O3
MW 391.3, MP 34-39 C, BP 200 C at 0.01 mm Hg, VP 3.4X10(E-7) mm Hg at 25 C
Minnow, sheepshead
CYPRINODON VARIEGATUS

Tissue	Cases Exposure Route	Range	Mean	General Information
3789 Body, whole	80	a) Not given b) Not given c) Not given d) Not given e) Not given	a) <0.25 mg/kg b) 0.46 mg/kg c) 1.5 mg/kg d) 2.4 mg/kg e) 5.7 mg/kg	a) Control b) 1.25 ug/L, exposure concentration c) 2.5 ug/L d) 5.0 ug/L e) 10 ug/L At 20 and 40 ug/L, mortality was >98%. Abnormal swimming motions, lethargy, 90 deg flex GC/MS

AQUATIC; FISHES; BODY; DELIBERATE EXPOSURE; INSECTICIDES; BIOCONCENTRATION; BIOLOGICAL MONITORING; POISONING
Hansen, D.J.; Goodman, L.R.; Moore, J.C.; Higdon, P.K. 1983 Environmental Toxicology and Chemistry 2:251-258

DDT, total (No postings in CHEMLINE).
C14-H9-Cl5
MW 354.50
Bass, Japan sea
LATEOLABRAX JAPONICUS

Tissue	Cases Exposure Route	Range	Mean	General Information
3790 Body	1	Not applicable	66 ppb Wet wt	Collected offshore 10/81. 20 g edible tissue analysed. DDD, DDE included. Japan, Osaka GC/MS

BODY; AQUATIC; ENVIRONMENTAL EXPOSURE; JAPAN; BROMINATED HYDROCARBONS; BROMINE ORGANIC COMPOUNDS; CHLORINATED HYDROCARBONS; CHLORINE ORGANIC COMPOUNDS; DDD; DDE; DDT; HEXACHLOROCYCLOHEXANE; PESTICIDES; POLYCHLORINATED BIPHENYLS; BIOACCUMULATION; FISHES; PESTICIDE RESIDUES; WATER POLLUTION
Watanabe, I.; Kashimoto, T.; Tatsukawa, R. 1983 Archives of Environmental Contamination and Toxicology 12:615-620

Bluegill
LEPOMIS MACROCHIRUS

Tissue	Cases Exposure Route	Range	Mean	General Information
3791 Body	a) 5 b) 5	a) 0.44-0.88 ppm b) 0.24-0.57 ppm Wet wt	a) 0.67 ppm b) 0.39 ppm Wet wt	a) Lake Providence, 3.3% lipids b) Lake Bruin, 2.2% lipids Collected 6/15-9/25/80. Secondary consumers, major foods are fish. Lakes acting as sumps. Louisiana GC

BODY; ENVIRONMENTAL EXPOSURE; LOUISIANA; CHLORINE ORGANIC COMPOUNDS; INSECTICIDES; BIOMAGNIFICATION; FISHES; AGRICULTURE; PESTICIDE RESIDUES; AQUATIC; TERRESTRIAL; BIRDS; SNAKES; FROGS; CRAYFISH
Niethammer, K.R.; White, D.H.; Baskett, T.S.; Sayre, M.W. 1984 Archives of Contamination and Toxicology 13:63-74

DDT, total (No postings in CHEMLINE).
C_{14}-H_9-Cl_5
MW 354.50

Bream, sea
NEMIPTERUS VIRGATUS

Tissue	Cases Exposure Route	Range	Mean	General Information
3792 Body	1	Not applicable	13 ppb Wet wt	Purchased at market 7/82. 20 g edible tissue analyzed. DDD, DDE included. Japan, Hongkong GC/MS
BODY; AQUATIC; ENVIRONMENTAL EXPOSURE; JAPAN; BROMINATED HYDROCARBONS; BROMINE ORGANIC COMPOUNDS; CHLORINATED HYDROCARBONS; CHLORINE ORGANIC COMPOUNDS; DDD; DDE; DDT; HEXACHLOROCYCLOHEXANE; PESTICIDES; POLYCHLORINATED BIPHENYLS; BIOACCUMULATION; FISHES; PESTICIDE RESIDUES; WATER POLLUTION				
Watanabe, I.; Kashimoto, T.; Tatsukawa, R. 1983 Archives of Environmental Contamination and Toxicology 12:615-620				

Bullfrog
RANA CATESBEIANA

Tissue	Cases Exposure Route	Range	Mean	General Information
3793 Body	1	Not detected-0.10 ppm Wet wt	0.03 ppm Wet wt	Lake Providence, 1.7% lipids. Collected 6/15-9/25/80. Secondary consumers, major foods are crayfish and insects. Lakes acting as sumps. Louisiana GC
BODY; ENVIRONMENTAL EXPOSURE; LOUISIANA; CHLORINE ORGANIC COMPOUNDS; INSECTICIDES; BIOMAGNIFICATION; FISHES; AGRICULTURE; PESTICIDE RESIDUES; AQUATIC; TERRESTRIAL; BIRDS; SNAKES; FROGS; CRAYFISH				
Niethammer, K.R.; White, D.H.; Baskett, T.S.; Sayre, M.W. 1984 Archives of Contamination and Toxicology 13:63-74				

Catfish, channel
ICTALURUS PUNETATUS

Tissue	Cases Exposure Route	Range	Mean	General Information
3794 Body	4	0.78-2.82 ppm Wet wt	1.50 ppm Wet wt	Lake Providence, 2.9% lipids. Collected 6/15-9/25/80. Tertiary consumers, major foods are fish and insects. Lakes acting as sumps. Louisiana GC
BODY; ENVIRONMENTAL EXPOSURE; LOUISIANA; CHLORINE ORGANIC COMPOUNDS; INSECTICIDES; BIOMAGNIFICATION; FISHES; AGRICULTURE; PESTICIDE RESIDUES; AQUATIC; TERRESTRIAL; BIRDS; SNAKES; FROGS; CRAYFISH				
Niethammer, K.R.; White, D.H.; Baskett, T.S.; Sayre, M.W. 1984 Archives of Contamination and Toxicology 13:63-74				

DDT, total (No postings in CHEMLINE).
C14-H9-Cl5
MW 354.50
Cattle
BOS sp.

Tissue	Cases Exposure Route	Range	Mean	General Information
3795 Adipose	1320 Ingestion	a) 0.08-<0.001 ppm b) 94.1-100% c) 1.3-0% d) 4.6-0%	a) Not applicable b) Not applicable c) Not applicable d) Not applicable e) Not applicable	a) 1972-1982, peak (0.16 ppm) 1973 b) % of samples 0-0.1 ppm, 1972-1982, trough (88.9%) 1973 c) % 0.11-0.2 ppm, 1972-1982, peak (4.4%) 1973 d) % 0.21-0.3 ppm, 1972-1982, peak (6.7%) 1973 Included DDT analog residues, sharp decline in % positive samples after 1972. Illinois GC

ADIPOSE TISSUE; CATTLE; TERRESTRIAL; ILLINOIS; ENVIRONMENTAL EXPOSURE; ALDRIN; DIELDRIN; DDT; HEPTACHLOR EPOXIDE; LINDANE; ACCIDENTAL POISONING; BIOACCUMULATION; FOOD CONTAMINATION; PESTICIDE RESIDUES; CHLORINATED HYDROCARBONS
Steffey, K.L.; Reynolds, J.D.; Petty, H.B. 1984 Journal of Environmental Science and Health B19(8&9):773-783

Tissue	Cases Exposure Route	Range	Mean	General Information
3796 Milk	Ingestion	a) 0.02-0.08 ppm b) 0.02-0.01 ppm c) 0.01-</=0.001 ppm d) 0.02-0.01 ppm e) 0.01-0.01 ppm	a) Not given b) Not given c) Not given d) Not given e) Not given	a) 1972 & 3 b) 1974 & 5 c) 1976 & 7 d) 1978 & 9 e) 1980 & 1 Range of yearly means. Composite samples from several farms. DDT and analogs gradually decreased over 10 yr. In statewide monitoring for chlorinated hydrocarbon insecticides, percentage contaminated samples decreased over study period. Illinois GC/MS

INSECTICIDES; PESTICIDE RESIDUES; MILK; CATTLE; ILLINOIS; BIOLOGICAL MONITORING; BIOCONCENTRATION; ALDRIN; DIELDRIN; DDT; METABOLITES; HEPTACHLOR EPOXIDE; TERRESTRIAL; CHLORINATED HYDROCARBONS; ENVIRONMENTAL EXPOSURE; HEXACHLOROCYCLOHEXANE
Steffey, K.L.; Mack, J.; MacMonegle, C.W.; Pettyl, H.B. 1984 Journal of Environmental Science and Health B19(1):49-65

Clam
MEGAPITARIA SQUALIDA

Tissue	Cases Exposure Route	Range	Mean	General Information
3797 Body	16	Not given	7.0 ppb Wet wt	Collected 7/80. Mexico (NW), Sonora, Yavaros lagoon system GC

CRUSTACEANS; MOLLUSKS; MUSCLES; CHLORINE ORGANIC COMPOUNDS; MEXICO; BODY; BIOACCUMULATION; FISHES; PESTICIDE RESIDUES; WATER POLLUTION; AQUATIC; ENVIRONMENTAL EXPOSURE
Rosales, M.T.L.; Escalona, R.L. 1983 Bulletin of Environmental Contamination and Toxicology 30:456-463

DDT, total (No postings in CHEMLINE).
C14-H9-Cl5
MW 354.50

Clam
MEGAPITARIA SQUALIDA

Tissue	Cases Exposure Route	Range	Mean	General Information
3798 Body		a) Not given b) Not given	a) 11 ng/g b) 4.0 ng/g	a) Site 1 b) Site 2 Collected 11/80. Pooled whole clams, mean sample wt 30 g Maine, Portland GC-EC

MAINE; BODY; DDT; POLYCHLORINATED BIPHENYLS; HEXACHLOROBENZENE; PENTACHLOROPHENOL; PHTHALATES; BIOACCUMULATION; MOLLUSKS; WATER POLLUTION; CHLORINE ORGANIC COMPOUNDS
Ray, L.E.; Murray, H.E.; Giam, C.S. 1983 Chemosphere 12(7/8):1031-1038

Clam, Asiatic
CORBICULA MANILENSIS

Tissue	Cases Exposure Route	Range	Mean	General Information
3799 Body, whole	9	<0.1-16 ug/kg Dry wt	3 ug/kg Dry wt Median	Trend in concentration increase from inorganic to organic to living material. August 1979-May 1980, sampling dates. Non-point sources. No significant seasonal, temporal or spatial variability reported. Florida, Apalachicola River GC-EC

BODY; ASIATIC CLAM; AQUATIC; ENVIRONMENTAL EXPOSURE; FLORIDA; TRACE ELEMENTS; PESTICIDES; POLYCHLORINATED BIPHENYLS; CHROMIUM; COPPER; LEAD; MANGANESE; MERCURY; ZINC; DDD; ORGANOPHOSPHATES; DDE; DDT; DIELDRIN; HEPTACHLOR EPOXIDE; INSECTICIDES; GEOLOGY
Elder, J.F.; Mattraw, H.C. 1984 Archives of Environmental Contamination and Toxicology 13:453-469

Coot, American
FULICA AMERICANA

Tissue	Cases Exposure Route	Range	Mean	General Information
3800 Body	4	0.25-0.59 ppm Wet wt	0.35 ppm Wet wt	Lake Providence, 10.6% lipids. Collected 2/80. Secondary consumers. Lakes acting as sumps. Louisiana GC

BODY; ENVIRONMENTAL EXPOSURE; LOUISIANA; CHLORINE ORGANIC COMPOUNDS; INSECTICIDES; BIOMAGNIFICATION; FISHES; AGRICULTURE; PESTICIDE RESIDUES; AQUATIC; TERRESTRIAL; BIRDS; SNAKES; FROGS; CRAYFISH
Niethammer, K.R.; White, D.H.; Baskett, T.S.; Sayre, M.W. 1984 Archives of Contamination and Toxicology 13:63-74

DDT, total (No postings in CHEMLINE).
C14-H9-Cl5
MW 354.50
Cottonmouth
AGKISTRODON PISCIVOROUS

Tissue	Cases Exposure Route	Range	Mean	General Information
3801 Body	a) 4 b) 1	a) Not detected-0.65 ppm b) Not detected-0.09 ppm Wet wt	a) 0.05 ppm b) 0.03 ppm Wet wt	a) Lake Providence, 4.3% lipids b) Lake Bruin, 2.5% lipids Collected 6/15-9/25/80. Tertiary consumers, major foods are snakes, fish and frogs. Lakes acting as sumps. Louisiana GC
BODY; ENVIRONMENTAL EXPOSURE; LOUISIANA; CHLORINE ORGANIC COMPOUNDS; INSECTICIDES; BIOMAGNIFICATION; FISHES; AGRICULTURE; PESTICIDE RESIDUES; AQUATIC; TERRESTRIAL; BIRDS; SNAKES; FROGS; CRAYFISH				
Niethammer, K.R.; White, D.H.; Baskett, T.S.; Sayre, M.W. 1984 Archives of Contamination and Toxicology 13:63-74				

Crab
CALLINECTES ARCUATUS

Tissue	Cases Exposure Route	Range	Mean	General Information
3802 Body	a) 5 b) 5	a) Not given b) Not given	a) 0.23 ppb b) 0.25 ppb Wet wt	a) Caimanero, 10/80 b) Yavaros, 1/81. Mexico (NW), Sonora, Yavaros lagoon system; Mexico (NW), Sinaloa, Huizache-Caimanero lagoon system GC
CRUSTACEANS; MOLLUSKS; MUSCLES; CHLORINE ORGANIC COMPOUNDS; MEXICO; BODY; BIOACCUMULATION; FISHES; PESTICIDE RESIDUES; WATER POLLUTION; AQUATIC; ENVIRONMENTAL EXPOSURE				
Rosales, M.T.L.; Escalona, R.L. 1983 Bulletin of Environmental Contamination and Toxicology 30:456-463				

Croaker, white
GENYONEMUS LINEATUS

Tissue	Cases Exposure Route	Range	Mean	General Information
3803 Muscle	60	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given	a) 0.57 +or- 0.20 mg/kg b) 0.46 +or- 0.12 mg/kg c) 0.15 +or- 0.04 mg/kg d) 0.14 +or- 0.04 mg/kg e) 0.23 +or- 0.05 mg/kg f) 0.085 +or- 0.022 mg/kg Wet wt	a) Uncooked b) Pan fried c) Pan fried, adjusted to 74% wt loss during frying d) Uncooked e) Pan fried f) Pan fried, adjusted to 39% wt loss during frying Collected 5-6/81 in Santa Monica Bay a)-c), and Orange County, Abalone Point d)-f). Composite fillet samples. Fish wt 9-38 g, length 10-13 cm California (S) GC-EC
MUSCLES; CALIFORNIA; BIOACCUMULATION; FISHES; WATER POLLUTION; DDT; POLYCHLORINATED BIPHENYLS				
Puffer, H.W.; Gossett, R.W. 1983 Bulletin of Environmental Contamination and Toxicology 30:65-73				

DDT, total (No postings in CHEMLINE).
C14-H9-Cl5
MW 354.50

Dolphin, striped
STENELLA COERULEOALBA

Tissue	Cases Exposure Route	Range	Mean	General Information
3804 Adipose	4 Ingestion	4200-6000 ug/kg	5200 ug/kg	Seawater levels 0.006-0.48 ng/l (mean 0.14 ng/l). Bioconcentration factor 37,000. Pacific Ocean GC-EC

BODY; BLUBBER; ENVIRONMENTAL EXPOSURE; FISHES; PACIFIC OCEAN; DDT; DDE; DDD; POLYCHLORINATED BIPHENYLS; HEXACHLOROCYCLOHEXANE; ANIMAL POPULATIONS; BIOACCUMULATION; WATER POLLUTION; ADIPOSE TISSUE
Tanabe, S.; Tanaka, H.; Tatsukawa, R. 1984 Archives of Environmental Contamination and Toxicology 13:731-738

Eagle, bald
HALIAEETUS LEUCOCEPHALUS

Tissue	Cases Exposure Route	Range	Mean	General Information
3805 Eggs	18	a) 0.05-0.10 ppm b) 0.02-0.26 ppm c) 0.03-0.05 ppm d) 0.03-0.13 ppm e) 0.05-1.2 ppm f) Not applicable g) 0.05-0.08 ppm h) 0.04-0.06 ppm Fresh wet wt	a) 0.08 ppm b) 0.11 ppm c) 0.04 ppm d) 0.08 ppm e) 0.34 ppm f) 0.04 ppm g) 0.07 ppm h) 0.05 ppm Fresh wet wt	a) MN, 1976, 1979, 2 eggs b) WI, 1976, 1979, 3 eggs c) OH, 1976, 2 eggs d) NY, 1971, 1977, 2 eggs e) ME, 1974, 1976, 4 eggs f) MD, 1976, 1 egg g) VA, 1976-77, 2 eggs h) FL, 1976, 2 eggs Seldom detected (18 of 126 eggs). GC-EC; GC-MS; Silica gel chromatography

EGGS; EAGLES; BIRDS; ENVIRONMENTAL EXPOSURE; ALASKA; ARIZONA; CALIFORNIA; DELAWARE; FLORIDA; LOUISIANA; MAINE; MARYLAND; MICHIGAN; MINNESOTA; NEW YORK; OHIO; OREGON; VIRGINIA; WISCONSIN; UNITED STATES; CHLORINATED HYDROCARBONS; CHLORINE ORGANIC COMPOUNDS; DDD; DDE; DDT; DIELDRIN; HEXACHLOROBENZENE; INSECTICIDES; MERCURY; PESTICIDES; POLYCHLORINATED BIPHENYLS; BIOACCUMULATION; PESTICIDE RESIDUES; POPULATION EXPOSURE
Wiemeyer, S.N.; Lamont, T.G.; Bunck, C.M.; Sindelar, C.R.; Gramlich, F.J.; Fraser, J.D.; Byrd, M.A. 1984 Archives of Environmental Contamination and Toxicology 13:529-549

Fish
PAGOTHENIA BORCHGREVINKI

Tissue	Cases Exposure Route	Range	Mean	General Information
3806 Body, whole	21	0.3-1.9 ng/g Wet wt	0.8 ng/g Wet wt	Pelagic, collected in 1981. Levels which increased with body size were related to body fat content. Antarctica, Syowa Station GC-EC

BODY; FISHES; AQUATIC; ENVIRONMENTAL EXPOSURE; ANTARCTICA; JAPAN; DDT; POLYCHLORINATED BIPHENYLS; AIR POLLUTION; WATER POLLUTION; BIOACCUMULATION; PESTICIDE RESIDUES; FOOD CONTAMINATION; FALLOUT; AGRICULTURE
Subramanian, B.R.; Tanabe, S.; Hidaka, H.; Tatsukawa, R. 1983 Archives of Environmental Contamination and Toxicology 12:621-626

DDT, total (No postings in CHEMLINE).
C14-H9-Cl5
MW 354.50
Fish
PAGOTHENIA BORCHGREVINKI

Tissue	Cases Exposure Route	Range	Mean	General Information
3807 Muscle	a) 1 b) 1	a) Not given b) Not given	a) 1.10 ppb b) 1.00 ppb Wet wt	a) Collected 10/80 b) Collected 1/81. Mexico (NW), Sinaloa, Huizache-Caimanero lagoon system GC
CRUSTACEANS; MOLLUSKS; MUSCLES; CHLORINE ORGANIC COMPOUNDS; MEXICO; BODY; BIOACCUMULATION; FISHES; PESTICIDE RESIDUES; WATER POLLUTION; AQUATIC; ENVIRONMENTAL EXPOSURE Rosales, M.T.L.; Escalona, R.L. 1983 Bulletin of Environmental Contamination and Toxicology 30:456-463				

Flounder
PARALICHTYS WOOLINARIA

Tissue	Cases Exposure Route	Range	Mean	General Information
3808 Muscle	1	Not given	6.50 ppb Wet wt	Collected 1/81. Mexico (NW), Sonora, Yavaros lagoon system GC
CRUSTACEANS; MOLLUSKS; MUSCLES; CHLORINE ORGANIC COMPOUNDS; MEXICO; BODY; BIOACCUMULATION; FISHES; PESTICIDE RESIDUES; WATER POLLUTION; AQUATIC; ENVIRONMENTAL EXPOSURE Rosales, M.T.L.; Escalona, R.L. 1983 Bulletin of Environmental Contamination and Toxicology 30:456-463				

Gar, spotted
LEPISOSTEUS OCULATUS

Tissue	Cases Exposure Route	Range	Mean	General Information
3809 Body	a) 1 b) 5	a) Not given b) 0.23-2.74 ppm Wet wt	a) 2.50 ppm b) 0.82 ppm Wet wt	a) Lake Providence, 11.1% lipids b) Lake Bruin, 2.7% lipids Collected 6/15-9/25/80. Tertiary consumers, major foods are fish. Lakes acting as sumps. Louisiana GC
BODY; ENVIRONMENTAL EXPOSURE; LOUISIANA; CHLORINE ORGANIC COMPOUNDS; INSECTICIDES; BIOMAGNIFICATION; FISHES; AGRICULTURE; PESTICIDE RESIDUES; AQUATIC; TERRESTRIAL; BIRDS; SNAKES; FROGS; CRAYFISH Niethammer, K.R.; White, D.H.; Baskett, T.S.; Sayre, M.W. 1984 Archives of Contamination and Toxicology 13:63-74				

DDT, total (No postings in CHEMLINE).
C14-H9-Cl5
MW 354.50
Goby
ACANTHOGOBIUS FLAVIMANUS

Tissue	Cases Exposure Route	Range	Mean	General Information
3410 Body	a) 1 b) 1 c) 1 d) 1	a) Not applicable b) Not applicable c) Not applicable d) Not applicable	a) 9 ppb b) 5 ppb c) 5 ppb d) 14 ppb Wet wt	a) Hiroshima b) Aichi c) Fukuoka d) Tottori Collected offshore 10/81. 20 g edible tissue analysed. DDD, DDE included. Japan GC/MS
BODY; AQUATIC; ENVIRONMENTAL EXPOSURE; JAPAN; BROMINATED HYDROCARBONS; BROMINE ORGANIC COMPOUNDS; CHLORINATED HYDROCARBONS; CHLORINE ORGANIC COMPOUNDS; DDD; DDE; DDT; HEXACHLOROCYCLOHEXANE; PESTICIDES; POLYCHLORINATED BIPHENYLS; BIOACCUMULATION; FISHES; PESTICIDE RESIDUES; WATER POLLUTION Watanabe, I.; Kashimoto, T.; Tatsukawa, R. 1983 Archives of Environmental Contamination and Toxicology 12:615-620				

Grunt
PARAPRISTIPOMA TRILINEATUM

Tissue	Cases Exposure Route	Range	Mean	General Information
3411 Body	1	Not applicable	5 ppb Wet wt	Purchased at market 7/82. 20 g edible tissue analysed. DDD, DDE included. Japan, Saniu GC/MS
BODY; AQUATIC; ENVIRONMENTAL EXPOSURE; JAPAN; BROMINATED HYDROCARBONS; BROMINE ORGANIC COMPOUNDS; CHLORINATED HYDROCARBONS; CHLORINE ORGANIC COMPOUNDS; DDD; DDE; DDT; HEXACHLOROCYCLOHEXANE; PESTICIDES; POLYCHLORINATED BIPHENYLS; BIOACCUMULATION; FISHES; PESTICIDE RESIDUES; WATER POLLUTION Watanabe, I.; Kashimoto, T.; Tatsukawa, R. 1983 Archives of Environmental Contamination and Toxicology 12:615-620				

Hairtail
TRICHIURUS LEPTURUS

Tissue	Cases Exposure Route	Range	Mean	General Information
3412 Body	1	Not applicable	21 ppb Wet wt	Purchased at market 7/82. 20 g edible tissue analysed. DDD, DDE included. Japan, Shikoku GC/MS
BODY; AQUATIC; ENVIRONMENTAL EXPOSURE; JAPAN; BROMINATED HYDROCARBONS; BROMINE ORGANIC COMPOUNDS; CHLORINATED HYDROCARBONS; CHLORINE ORGANIC COMPOUNDS; DDD; DDE; DDT; HEXACHLOROCYCLOHEXANE; PESTICIDES; POLYCHLORINATED BIPHENYLS; BIOACCUMULATION; FISHES; PESTICIDE RESIDUES; WATER POLLUTION Watanabe, I.; Kashimoto, T.; Tatsukawa, R. 1983 Archives of Environmental Contamination and Toxicology 12:615-620				

DDT, total (No postings in CHEMLINE).
C14-H9-Cl5
MW 354.50

Heron, green-backed
BUTORIDES STRIATUS

Tissue	Cases Exposure Route	Range	Mean	General Information
3813 Adipose	4 Ingestion	Not given	6.28 ppm Wet wt	Composite from birds shot in 1980. Residues linked to fish diet. Louisiana, Lake Providence GC; GC/MS
3814 Body	a) 12 b) 14 Ingestion	a) Not detected-2.91 ppm b) Not detected-1.22 ppm Wet wt	a) 0.13 ppm b) 0.07 ppm Wet wt Geometric means	a) Adults, mean lipid 16.2%, 6 had detectable levels b) Immature, mean lipid 14.8%, 6 had detectable levels Collected (shot) in 1980. Beak, feet, wing tips, skin, GI tract removed before homogenization. Residues linked to fish diet. Louisiana, Lake Province, Lake Brain, Lake St. John GC; GC/MS
CHLORINE ORGANIC COMPOUNDS; FISHES; LOUISIANA; PESTICIDE RESIDUES; BIOACCUMULATION; DIETS; ADIPOSE TISSUE; LIVER; MUSCLES; BRAIN; BIOLOGICAL MONITORING; ENVIRONMENTAL EXPOSURE; BIRDS; WATERFOWL; AQUATIC; TERRESTRIAL; WATER POLLUTION; DDD; DDE; DDT; DIELDRIN; POLYCHLORINATED BIPHENYLS				
Niethammer, K.R.; Baskett, T.S.; White, D.H. 1984 Bulletin of Environmental Contamination and Toxicology 33:491-498				

Tissue	Cases Exposure Route	Range	Mean	General Information
3815 Body	a) 4 b) 8	a) Not detected-1.22 ppm b) Not detected-2.91 ppm Wet wt	a) 0.35 ppm b) 0.27 ppm Wet wt	a) Lake Providence, 11.4% lipids b) Lake Bruin, 12.9% lipids Collected between 6/15-9/25/80. Tertiary consumers, major foods are fish. Lakes acting as sumps. Immature birds are good monitors of contamination. Louisiana GC
BODY; ENVIRONMENTAL EXPOSURE; LOUISIANA; CHLORINE ORGANIC COMPOUNDS; INSECTICIDES; BIOMAGNIFICATION; FISHES; AGRICULTURE; PESTICIDE RESIDUES; AQUATIC; TERRESTRIAL; BIRDS; SNAKES; FROGS; CRAYFISH				
Niethammer, K.R.; White, D.H.; Baskett, T.S.; Sayre, M.W. 1984 Archives of Contamination and Toxicology 13:63-74				

Heron, little blue
EGRETTA CAERULEA

Tissue	Cases Exposure Route	Range	Mean	General Information
3816 Body	6 Ingestion	Not detected-2.28 ppm Wet wt	0.29 ppm Wet wt Geometric mean	Adults shot 1980, 4 had detectable levels, mean lipid 10.8%. Beak, feet, skin, wing tips and GI tract removed before homogenization. Moderate residues linked to mixed diet of fish, crustaceans, and insects. Louisana, Lake Providence, Lake Bruin, Lake St. John GC; GC/MS
CHLORINE ORGANIC COMPOUNDS; FISHES; LOUISIANA; PESTICIDE RESIDUES; BIOACCUMULATION; DIETS; ADIPOSE TISSUE; LIVER; MUSCLES; BRAIN; BIOLOGICAL MONITORING; ENVIRONMENTAL EXPOSURE; BIRDS; WATERFOWL; AQUATIC; TERRESTRIAL; WATER POLLUTION; DDD; DDE; DDT; DIELDRIN; POLYCHLORINATED BIPHENYLS				
Niethammer, K.R.; Baskett, T.S.; White, D.H. 1984 Bulletin of Environmental Contamination and Toxicology 33:491-498				

DDT, total (No postings in CHEMLINE).
C14-H9-Cl5
MW 354.50

Heron, little blue
EGRETTA CAERULEA

Tissue	Cases Exposure Route	Range	Mean	General Information
3617 Body	4	Not detected-2.33 ppm Wet wt	0.11 ppm Wet wt	Lake Bruin, 6.0% lipids. Collected 6/15-9/25/80. Tertiary consumer, major foods are small fish and invertebrates. Lakes acting as sumps. Louisiana GC
BODY; ENVIRONMENTAL EXPOSURE; LOUISIANA; CHLORINE ORGANIC COMPOUNDS; INSECTICIDES; BIOMAGNIFICATION; FISHES; AGRICULTURE; PESTICIDE RESIDUES; AQUATIC; TERRESTRIAL; BIRDS; SNAKES; FROGS; CRAYFISH				
Niethammer, K.R.; White, D.H.; Baskett, T.S.; Sayre, M.W. 1984 Archives of Contamination and Toxicology 13:63-74				

Heron, yellow-crowned night
NYCTICORAX VIOLACEUS

Tissue	Cases Exposure Route	Range	Mean	General Information
3618 Body	13 Ingestion	Not detected-0.24 ppm Wet wt	0.04 ppm Wet wt Geometric mean	Immature, shot in 1980. 3 had detectable levels. Mean lipid 8.6%. Skin, beak, feet, GI tract and wing tips removed before homogenization. Low residues linked to crayfish diet. Louisana, Lake Providence, Lake Bruin, Lake St. John GC; GC/MS
CHLORINE ORGANIC COMPOUNDS; FISHES; LOUISIANA; PESTICIDE RESIDUES; BIOACCUMULATION; DIETS; ADIPOSE TISSUE; LIVER; MUSCLES; BRAIN; BIOLOGICAL MONITORING; ENVIRONMENTAL EXPOSURE; BIRDS; WATERFOWL; AQUATIC; TERRESTRIAL; WATER POLLUTION; DDD; DDE; DDT; DIELDRIN; POLYCHLORINATED BIPHENYLS				
Niethammer, K.R.; Baskett, T.S.; White, D.H. 1984 Bulletin of Environmental Contamination and Toxicology 33:491-498				

Tissue	Cases Exposure Route	Range	Mean	General Information
3619 Body	3	Not detected-0.24 ppm Wet wt	0.04 ppm Wet wt	Lake Providence, 11.4% lipids. Collected 6/15-9/25/80. Secondary consumer. Lakes acting as sumps. Louisiana GC
BODY; ENVIRONMENTAL EXPOSURE; LOUISIANA; CHLORINE ORGANIC COMPOUNDS; INSECTICIDES; BIOMAGNIFICATION; FISHES; AGRICULTURE; PESTICIDE RESIDUES; AQUATIC; TERRESTRIAL; BIRDS; SNAKES; FROGS; CRAYFISH				
Niethammer, K.R.; White, D.H.; Baskett, T.S.; Sayre, M.W. 1984 Archives of Contamination and Toxicology 13:63-74				

DDT, total (No postings in CHEMLINE).
C14-H9-Cl5
MW 354.50
Loon, common
GAVIA IMMER

Tissue	Cases Exposure Route	Range	Mean	General Information
3820 Adipose	a) 21 b) 40 c) 58 d) 6 e) 13 f) 10 g) 11	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given g) Not given	a) 12.5 ug/g b) 58.0 ug/g c) 70.6 ug/g d) 452 ug/g e) 1008 ug/g f) 754 ug/g g) 232+/-72 ug/g Wet wt	a) Healthy juveniles, 74% fat b) Healthy adult males, 66% fat c) Healthy adult females, 73% fat d) Emaciated juveniles, 67% fat e) Emaciated adult males, 54% fat f) Emaciated adult females, 56% fat g) Healthy, collected in 1978-79, 62.0+/-13.1% fat a-f) collected in 1971-1974. DDE represented 89-100% of DDT. Canada, Ontario, Kinoje Lake; Algonquin Park; Parry Sound GC
3821 Blood	a) 8 b) 13 c) 10	a) Not given b) Not given c) Not given	a) 0.03+/-0.03 mg/kg b) 0.11+/-0.17 mg/kg c) 1.75+/-1.84 mg/kg Wet wt	a) 0.3+/-0.2% fat in healthy juveniles b) 0.8+/-1.7% fat in healthy adults c) 0.4+/-0.6% fat in emaciated adults Collected in 1971-74. DDE represented 89-100% of DDT. Canada, Ontario, Kinoje Lake; Algonquin Park; Parry Sound GC
3822 Brain	a) 21 b) 40 c) 58 d) 6 e) 13 f) 10 g) 11 h) 38 i) 1	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given g) Not given h) Not given i) Not given	a) 0.18 ug/g b) 0.83 ug/g c) 0.78 ug/g d) 35.6 ug/g e) 25.2 ug/g f) 27.9 ug/g g) 3.70+/-2.95 ug/g h) 0.48+/-0.59 ug/g i) 49 ug/g Wet wt	a) Healthy juveniles, 6.8% fat b) Healthy adult males, 6.9% fat c) Healthy adult females, 6.9% fat d) Emaciated juveniles, 7.2% fat e) Emaciated adult males, 7.1% fat f) Emaciated adult females, 6.2% fat g) Unknown condition, 7.76+/-1.12% fat h) Healthy, 6.16+/-0.59% fat i) Emaciated, 7.13% fat a) -f) collected in 1971-74, g) in 1969 h-i) in 1978-79, DDE represented 89-100% of DDT. Canada, Ontario, Kinoje Lake; Algonquin Park; Parry Sound GC
3828 Embryos	a) 4 b) 14 c) 34 d) 15 e) 12 f) 19	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given	a) 4.7 ug/g b) 1.7 ug/g c) 2.3 ug/g d) 0.1 ug/g e) 0.00 ug/g f) 0.00 ug/g Wet wt	a) Collected in 1968 from Algonquin b) 1969 from Kinoje Lake c) 1970, Algonquin d) 1972, from Algonquin-Parry Sound e) 1978, Algonquin-Parry Sound f) 1979-1980, Algonquin-Parry Sound Significantly higher, a) than b). c)-f) showed decline in organochlorine contaminants. Eggs in 1969 and 1970 had significantly thinner shells than those collected pre-1947. Canada, Ontario, Kinoje Lake; Algonquin Park; Parry Sound GC

(next page)

DDT, total (No postings in CHEMLINE).
C14-H9-Cl5
MW 354.50

Loon, common
GAVIA IMMER

(continued)

Tissue	Cases Exposure Route	Range	Mean	General Information
3824 Feathers	103	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given g) Not given h) Not given	a) 0.18 mg/kg b) 0.14 mg/kg c) 1.17 mg/kg d) 0.32 mg/kg e) 8.90 mg/kg f) 4.08 mg/kg g) 3.64 mg/kg h) 1.62 mg/kg Wet wt	a) From back of healthy juveniles, 4.3% fat b) From belly of healthy juveniles, 2.9% fat c) From back of healthy adults, 2.2% fat d) From belly of healthy adults, 1.5% fat e) From back of emaciated juveniles, 3.3% fat f) From belly of emaciated juveniles. 0.3% fat g) From back of emaciated adults, 0.5% fat h) From belly of emaciated adults, 0.3 % fat Collected in 1971-74. DDE represented 89-100% of DDT. Canada, Ontario, Kinoje Lake; Algonquin Park; Parry Sound GC
3825 Gizzard	a) 8 b) 13 c) 10	a) Not given b) Not given c) Not given	a) 0.38+/-0.38 mg/kg b) 3.33+/-10.9 mg/kg c) 5.45+/-5.82 mg/kg Wet wt	a) 2.9+/-2.6% fat in healthy juveniles b) 2.8+/-3.0% fat in healthy adults c) 1.1+/-1.6% fat in emaciated adults Collected in 1971-74. DDE represented 89-100% of DDT. Canada, Ontario, Kinoje Lake; Algonquin Park; Parry Sound GC
3826 Heart	a) 8 b) 13 c) 10	a) Not given b) Not given c) Not given	a) 0.54+/-1.45 mg/kg b) 4.34+/-6.25 mg/kg c) 9.64+/-4.94 mg/kg Wet wt	a) 5.3+/-2.4% fat in healthy juveniles b) 4.4+/-2.7% fat in healthy adults c) 1.1+/-1.3% fat in emaciated adults Collected in 1971-74. DDE represented 89-100% of DDT. Canada, Ontario, Kinoje Lake; Algonquin Park; Parry Sound GC
3827 Intestine	a) 8 b) 13 c) 10	a) Not given b) Not given c) Not given	a) 0.78+/-0.87 mg/kg b) 2.02+/-3.27 mg/kg c) 15.8+/-15.4 mg/kg Wet wt	a) 6.4+/-8.2% fat in healthy juveniles b) 4.9+/-3.9% fat in healthy adults c) 2.9+/-3.8% fat in emaciated adults Collected in 1971-74. DDE represented 89-100% of DDT. Canada, Ontario, Kinoje Lake; Algonquin Park; Parry Sound GC
3828 Kidney	a) 8 b) 13 c) 10	a) Not given b) Not given c) Not given	a) 0.09+/-0.08 mg/kg b) 0.48+/-0.46 mg/kg c) 20.0+/-20.4 mg/kg Wet wt	a) 3.1+/-1.6% fat in healthy juveniles b) 1.6+/-1.5% fat in healthy adults c) 1.2+/-0.5% fat in emaciated adults Collected in 1971-74. DDE represented 89-100% of DDT. Canada, Ontario, Kinoje Lake; Algonquin Park; Parry Sound GC
3829 Liver	a) 21 b) 49 c) 58 d) 6 e) 13 f) 10	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given	a) 0.27 ug/g b) 1.67 ug/g c) 2.05 ug/g d) 78.1 ug/g e) 35.0 ug/g f) 36.3 ug/g Wet wt	a) Healthy juveniles, 2.6% fat b) Healthy adult males, 3.5% fat c) Healthy adult females, 3.8% fat d) Emaciated juveniles, 2.0% fat e) Emaciated adult males, 3.3% fat f) Emaciated adult females, 1.7% fat Collected in 1971-74. DDE represented 89-100% of DDT. Canada, Ontario, Kinoje Lake; Algonquin Park; Parry Sound GC

(next page)

DDT, total (No postings in CHEMLINE).
C14-H9-Cl5
MW 354.50

Loon, common
GAVIA IMMER

(continued)

Tissue	Cases Exposure Route	Range	Mean	General Information
3830 Lung	a) 5 b) 13 c) 10	a) Not given b) Not given c) Not given	a) 0.15+/-0.19 mg/kg b) 0.77+/-0.75 mg/kg c) 4.04+/-4.95 mg/kg Wet wt	a) 2.0+/-1.0% fat in healthy juveniles b) 1.2+/-0.7% fat in healthy adults c) 0.4+/-0.1% fat in emaciated adults Collected in 1971-74. DDE represented 89-100% of DDT. Canada, Ontario, Kinoje Lake; Algonquin Park; Parry Sound GC
3831 Muscle	a) 21 b) 49 c) 58 d) 6 e) 13 f) 10 g) 21	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given g) Not given	a) 0.81 ug/g b) 2.32 ug/g c) 2.32 ug/g d) 12.6 ug/g e) 16.3 ug/g f) 11.7 ug/g g) 2.59+/-1.16 ug/g Wet wt	a) Healthy juveniles, 5.4% fat b) Healthy adult males, 4.4% fat c) Healthy adult females, 4.4% fat d) Emaciated juveniles, 0.5% fat e) Emaciated adult males, 1.2% fat f) Emaciated adult females, 0.3% fat g) Healthy, collected in 1978-79, 2.59+/-1.16% fat a) -f) collected in 1971-1974. DDE represented 89-100% of DDT. Canada, Ontario, Kinoje Lake; Algonquin Park; Parry Sound GC
3832 Uropygial gland	a) 15 b) 72 c) 3 d) 13	a) Not given b) Not given c) Not given d) Not given	a) 7.53 mg/kg b) 42.7 mg/kg c) 70.5 mg/kg d) 280 mg/kg	a) Healthy juveniles, 34% fat b) Healthy adults, 36% fat c) Emaciated juveniles, 25% fat d) Emaciated adults, 27% fat Residues could be lost through this gland. Collected in 1971-74. DDE represented 89-100% of DDT. Canada, Ontario, Kinoje Lake; Algonquin Park; Parry Sound GC
3833 Uropygial oil	a) 15 b) 72 c) 3 d) 13	a) Not given b) Not given c) Not given d) Not given	a) 7.45 mg/kg b) 34.7 mg/kg c) 300 mg/kg d) 470 mg/kg Wet wt	a) Healthy juveniles, 42% fat b) Healthy adults, 51% fat c) Emaciated juveniles, 65% fat d) Emaciated adults, 33% fat Residues could be lost through this substance. Collected in 1971-74. DDE represented 89-100% of DDT. Canada, Ontario, Kinoje Lake; Algonquin Park; Parry Sound GC

EGGS; BRAIN; ADIPOSE TISSUE; LIVER; MUSCLES; FEATHERS; INTESTINES; EMBRYOS; DDT; DDE; DIELDRIN; HEPTACHLOR EPOXIDE; POLYCHLORINATED BIPHENYLS; HEXACHLOROBENZENE; MERCURY; CHLORINE ORGANIC COMPOUNDS; PESTICIDES; PESTICIDE RESIDUES; BIOINDICATORS; BIOLOGICAL MONITORING; BIOACCUMULATION; LUNGS; GIZZARD; BLOOD; HEART; KIDNEYS

Frank, R.; Lumsden, H.; Barr, J.F.; Braun, H.E. 1983 Archives of Environmental Contamination and Toxicology 12:641-654

DDT, total (No postings in CHEMLINE).
C14-H9-Cl5
MW 354.50
Mackerel
PNEUMATOPHORUS JAPONICUS

Tissue	Cases Exposure Route	Range	Mean	General Information
3834 Body	1	Not applicable	44 ppb Wet wt	Purchased at market 7/82. 20 g edible tissue analyzed. DDD, DDE included. Japan, Shizuoka GC/MS

BODY; AQUATIC; ENVIRONMENTAL EXPOSURE; JAPAN; BROMINATED HYDROCARBONS; BROMINE ORGANIC COMPOUNDS; CHLORINATED HYDROCARBONS; CHLORINE ORGANIC COMPOUNDS; DDD; DDE; DDT; HEXACHLOROCYCLOHEXANE; PESTICIDES; POLYCHLORINATED BIPHENYLS; BIOACCUMULATION; FISHES; PESTICIDE RESIDUES; WATER POLLUTION
Watanabe, I.; Kashimoto, T.; Tatsukawa, R. 1983 Archives of Environmental Contamination and Toxicology 12:615-620

Tissue	Cases Exposure Route	Range	Mean	General Information
3835 Muscle	a) 2 b) 1	a) Not given b) Not given	a) 1.20 ppb b) 2.44 ppb Wet wt	a) 10/80 b) 1/81. Mexico (NW), Sonora, Yavaros lagoon system GC

CRUSTACEANS; MOLLUSKS; MUSCLES; CHLORINE ORGANIC COMPOUNDS; MEXICO; BODY; BIOACCUMULATION; FISHES; PESTICIDE RESIDUES; WATER POLLUTION; AQUATIC; ENVIRONMENTAL EXPOSURE
Rosales, M.T.L.; Escalona, R.L. 1983 Bulletin of Environmental Contamination and Toxicology 30:456-463

Mackerel, horse
TRACHURUS JAPONICUS

Tissue	Cases Exposure Route	Range	Mean	General Information
3836 Body	1	Not applicable	9 ppb Wet wt	Purchased at market 7/82. 20 g edible tissue analyzed. DDD, DDE included. Japan, Wakayama GC/MS

BODY; AQUATIC; ENVIRONMENTAL EXPOSURE; JAPAN; BROMINATED HYDROCARBONS; BROMINE ORGANIC COMPOUNDS; CHLORINATED HYDROCARBONS; CHLORINE ORGANIC COMPOUNDS; DDD; DDE; DDT; HEXACHLOROCYCLOHEXANE; PESTICIDES; POLYCHLORINATED BIPHENYLS; BIOACCUMULATION; FISHES; PESTICIDE RESIDUES; WATER POLLUTION
Watanabe, I.; Kashimoto, T.; Tatsukawa, R. 1983 Archives of Environmental Contamination and Toxicology 12:615-620

DDT, total (No postings in CHEMLINE).
C14-H9-Cl5
MW 354.50

Merganser, red-breasted
MERGUS SERRATOR

Tissue	Cases Exposure Route	Range	Mean	General Information
3837 Eggs	a) 40 b) 40	a) Not applicable b) Not applicable	a) 0.33 ppm b) 0.19 ppm Wet wt Geometric means	a) Randomly selected b) Unhatched Collected 1977, pairs from same nests analysed b) significantly lower ($p<0.01$) than a). Lower limit 0.10 ppm. Lake Michigan, northwestern islands GLC

EGGS; AQUATIC; BIRDS; WATERFOWL; ENVIRONMENTAL EXPOSURE; GREAT LAKES; BROMINATED HYDROCARBONS; CHLORINATED HYDROCARBONS; BROMINE ORGANIC COMPOUNDS; CHLORINE ORGANIC COMPOUNDS; DDE; DDT; DIELDRIN; HEPTACHLOR EPOXIDE; HEXACHLOROBENZENE; INSECTICIDES; MERCURY; NONACHLOR; OXYCHLORDANE; PESTICIDES; POLYBROMINATED BIPHENYLS; POLYCHLORINATED BIPHENYLS; BIOACCUMULATION

Haseltine, S.D.; Heinz, G.H.; Hensler, G.L.; Reichel, W.L. 1983 Environmental Pollution 32:211-232

Mosquitofish
GAMBUSIA AFFINIS

Tissue	Cases Exposure Route	Range	Mean	General Information
3838 Body	a) 5 b) 2	a) 0.24-0.39 ppm b) Not detected-0.07 ppm Wet wt	a) 0.32 ppm b) 0.04 ppm Wet wt	a) Lake Providence, 2.6% lipids b) Lake Bruin, 2.4% lipids. Collected 6/15-9/25/80. Secondary consumers, major foods are small invertebrates. Lakes acting as sumps. Louisiana GC

BODY; ENVIRONMENTAL EXPOSURE; LOUISIANA; CHLORINE ORGANIC COMPOUNDS; INSECTICIDES; BIOMAGNIFICATION; FISHES; AGRICULTURE; PESTICIDE RESIDUES; AQUATIC; TERRESTRIAL; BIRDS; SNAKES; FROGS; CRAYFISH

Niethammer, K.R.; White, D.H.; Baskett, T.S.; Sayre, M.W. 1984 Archives of Contamination and Toxicology 13:63-74

Mullet, striped
MUGIL CEPHALUS

Tissue	Cases Exposure Route	Range	Mean	General Information
3839 Muscle	a) 3 b) 3 c) 11 d) 3 e) 6 f) 4	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given	a) 1.60 ppb b) 5.14 ppb c) 0.37 ppb d) 2.02 ppb e) 1.92 ppb f) 11.73 ppb Wet wt	a) Moron carit, 7/80 b) Moron carit, 7/81 c) Yavaros, 10/80 d) Yavaros, 1/81 e) Yavaros, 4/81 f) Caimanero, 1/81. Mexico (NW), Sonora, Yavaros lagoon system; Mexico (NW), Sinaloa, Huisache-Caimanreo lagoon system GC

CRUSTACEANS; MOLLUSKS; MUSCLES; CHLORINE ORGANIC COMPOUNDS; MEXICO; BODY; BIOACCUMULATION; FISHES; PESTICIDE RESIDUES; WATER POLLUTION; AQUATIC; ENVIRONMENTAL EXPOSURE

Rosales, M.T.L.; Escalona, R.L. 1983 Bulletin of Environmental Contamination and Toxicology 30:456-463

DDT, total (No postings in CHEMLINE).
C14-H9-Cl5
MW 354.50
Mullet, white
MUGIL CUREMA

Tissue	Cases Exposure Route	Range	Mean	General Information
3840 Muscle	a) 4 b) 3	a) Not given b) Not given	a) 1.90 ppb b) 6.87 ppb Wet wt	a) Yavaros, 1/81 b) Caimanero, 10/80. Mexico (NW), Sonora, Yavaros lagoon system; Mexico (NW), Sinaloa, Huizache-Caimanreo lagoon system GC

CRUSTACEANS; MOLLUSKS; MUSCLES; CHLORINE ORGANIC COMPOUNDS; MEXICO; BODY; BIOACCUMULATION; FISHES; PESTICIDE RESIDUES; WATER POLLUTION; AQUATIC; ENVIRONMENTAL EXPOSURE
Rosales, M.T.L.; Escalona, R.L. 1983 Bulletin of Environmental Contamination and Toxicology 30:456-463

Mussel
MYTILUS EDULIS

Tissue	Cases Exposure Route	Range	Mean	General Information
3841 Body	a) 1 b) 1 c) 1 d) 1	a) Not applicable b) Not applicable c) Not applicable d) Not applicable	a) 18 ppb b) 44 ppb c) 15 ppb d) 6 ppb Wet wt	a) Osaka b) Wakayama c) Ehime d) Oita Collected offshore 10/81. 20 g edible tissue analysed. DDD, DDE included. Japan GC/MS

BODY; AQUATIC; ENVIRONMENTAL EXPOSURE; JAPAN; BROMINATED HYDROCARBONS; BROMINE ORGANIC COMPOUNDS; CHLORINATED HYDROCARBONS; CHLORINE ORGANIC COMPOUNDS; DDD; DDE; DDT; HEXACHLOROCYCLOHEXANE; PESTICIDES; POLYCHLORINATED BIPHENYLS; BIOACCUMULATION; FISHES; PESTICIDE RESIDUES; WATER POLLUTION
Watanabe, I.; Kashimoto, T.; Tatsukawa, R. 1983 Archives of Environmental Contamination and Toxicology 12:615-620

Myctophid
DIAPHUS SUBORBITALIS

Tissue	Cases Exposure Route	Range	Mean	General Information
3842 Body	Ingestion	Not given	43 ug/kg	Seawater levels 0.006-0.48 ng/l (mean 0.14 ng/l). Bioconcentration factor 310. Pacific Ocean GC-EC

BODY; BLUBBER; ENVIRONMENTAL EXPOSURE; FISHES; PACIFIC OCEAN; DDT; DDE; DDD; POLYCHLORINATED BIPHENYLS; HEXACHLOROCYCLOHEXANE; ANIMAL POPULATIONS; BIOACCUMULATION; WATER POLLUTION; ADIPOSE TISSUE
Tanabe, S.; Tanaka, H.; Tatsukawa, R. 1984 Archives of Environmental Contamination and Toxicology 13:731-738

DDT, total (No postings in CHEMLINE).

C14-H9-Cl5
MW 354.50

Penguin, Jackass
SPHENISCUS DEMERSUS

Tissue	Cases Exposure Route	Range	Mean	General Information
3843 Eggs	5	0.001-0.01 ug/g	0.004 ug/g	None in eggs (13 total) of 7 other species. No DDD detected. South Africa, Eastern Cape GC/MS

BIRDS; AQUATIC; SOUTH AFRICA; CHLORINATED HYDROCARBONS; CHLORINE ORGANIC COMPOUNDS; DDE; DDT; DIELDRIN; PESTICIDES; INSECTICIDES; POLYCHLORINATED BIPHENYLS; BIOACCUMULATION; BIOINDICATORS; PESTICIDE RESIDUES; WATER POLLUTION; ENVIRONMENTAL EXPOSURE

de Kock, A.C.; Randall, R.M. 1984 Environmental Pollution (Series A) 35:193-201

Pike
ESOX LUCIUS

Tissue	Cases Exposure Route	Range	Mean	General Information
3844 Liver	a) 40 b) 20 c) 21	a) Not given b) Not given c) Not given	a) 0.063+/-0.058 mg/kg b) 0.071+/-0.064 mg/kg c) 0.11+/-0.074 mg/kg Wet wt	a) Southern lakes b) Northern lakes c) Baltic Sea Collected at 75 sampling stations 1-4/82. Length 41-72 cm, wt 480-6000 g, 0.51-1.38% fat. Finland GC/MS; GC-EC
3845 Muscle	a) 40 b) 20 c) 21	a) Not given b) Not given c) Not given	a) 0.007+/-0.006 mg/kg b) 0.013+/-0.017 mg/kg c) 0.018+/-0.022 mg/kg Wet wt	a) Southern lakes b) Northern lakes c) Baltic Sea Collected at 75 sampling stations 1-4/82. Length 41-72 cm, wt 480-6000 g, 0.51-1.38% fat. Finland GC/MS; GC-EC

LIVER; MUSCLES; COMPARATIVE EVALUATIONS; DDT; FINLAND; POLYCHLORINATED BIPHENYLS; FISHES; PESTICIDE RESIDUES; WATER POLLUTION; AQUATIC; ENVIRONMENTAL EXPOSURE; PESTICIDES

Pyysalo, H.; Wickstrom, K.; Litmanen, R. 1983 Chemosphere 12(6):837-842

Roach
RUTILUS RUTILUS

Tissue	Cases Exposure Route	Range	Mean	General Information
3846 Muscle	11	Not given	0.51+/-0.032 mg/kg Wet wt	Collected at 12 sampling stations. Length 16-18 cm, wt 48.5-54.0 g, 1.31% fat. Finland GC/MS; GC-EC

LIVER; MUSCLES; COMPARATIVE EVALUATIONS; DDT; FINLAND; POLYCHLORINATED BIPHENYLS; FISHES; PESTICIDE RESIDUES; WATER POLLUTION; AQUATIC; ENVIRONMENTAL EXPOSURE; PESTICIDES

Pyysalo, H.; Wickstrom, K.; Litmanen, R. 1983 Chemosphere 12(6):837-842

DDT, total (No postings in CHEMLINE).
C14-H9-Cl5
MW 354.50

Sardine
SARDINOPS MELANOSTICTA

Tissue	Cases Exposure Route	Range	Mean	General Information
3847 Body	a) 2 b) 1	a) Not applicable b) Not applicable	a) 19 ppb b) 16 ppb Wet wt	a) Wakayama b) Chiba Purchased at market 7/82. 20 g edible tissue analysed. DDD, DDE included. Japan GC/MS

BODY; AQUATIC; ENVIRONMENTAL EXPOSURE; JAPAN; BROMINATED HYDROCARBONS; BROMINE ORGANIC COMPOUNDS; CHLORINATED HYDROCARBONS; CHLORINE ORGANIC COMPOUNDS; DDD; DDE; DDT; HEXACHLOROCYCLOHEXANE; PESTICIDES; POLYCHLORINATED BIPHENYLS; BIOACCUMULATION; FISHES; PESTICIDE RESIDUES; WATER POLLUTION
Watanabe, I.; Kashimoto, T.; Tatsukawa, R. 1983 Archives of Environmental Contamination and Toxicology 12:615-620

Saury, Pacific
COLOLABIS SAIRA

Tissue	Cases Exposure Route	Range	Mean	General Information
3848 Body	1	Not applicable	6 ppb Wet wt	Purchased at market 7/82. 20 g edible tissue analysed. DDD, DDE included. Japan, Iwate GC/MS

BODY; AQUATIC; ENVIRONMENTAL EXPOSURE; JAPAN; BROMINATED HYDROCARBONS; BROMINE ORGANIC COMPOUNDS; CHLORINATED HYDROCARBONS; CHLORINE ORGANIC COMPOUNDS; DDD; DDE; DDT; HEXACHLOROCYCLOHEXANE; PESTICIDES; POLYCHLORINATED BIPHENYLS; BIOACCUMULATION; FISHES; PESTICIDE RESIDUES; WATER POLLUTION
Watanabe, I.; Kashimoto, T.; Tatsukawa, R. 1983 Archives of Environmental Contamination and Toxicology 12:615-620

Scorpionfish
SEBASTES INERMIS

Tissue	Cases Exposure Route	Range	Mean	General Information
3849 Body	1	Not applicable	16 ppb Wet wt	Purchased at market 7/82. 20 g edible tissue analysed. DDD, DDE included. Japan, Aomori GC/MS

BODY; AQUATIC; ENVIRONMENTAL EXPOSURE; JAPAN; BROMINATED HYDROCARBONS; BROMINE ORGANIC COMPOUNDS; CHLORINATED HYDROCARBONS; CHLORINE ORGANIC COMPOUNDS; DDD; DDE; DDT; HEXACHLOROCYCLOHEXANE; PESTICIDES; POLYCHLORINATED BIPHENYLS; BIOACCUMULATION; FISHES; PESTICIDE RESIDUES; WATER POLLUTION
Watanabe, I.; Kashimoto, T.; Tatsukawa, R. 1983 Archives of Environmental Contamination and Toxicology 12:615-620

DDT, total (No postings in CHEMLINE).
C14-H9-Cl5
MW 354.50
Seal, harp
PHOCA GROENLANDICA

Tissue	Cases Exposure Route	Range	Mean	General Information
3850 Adipose	227 Ingestion	a) Not given b) Not given c) Not given d) Not given	a) 2.37+/-3.52 mg/kg b) 1.75+/-1.43 mg/kg c) 2.69+/-4.13 mg/kg d) 2.10+/-1.95 mg/kg	a) Males b) Females c) Males, extractable fat d) Females, extractable fat DDT included metabolites 80% DDE, 13% p,p'-DDT, 5% p,p'-TDE, 2% o,p'-DDT. 1976-78 annual hunt. Statistical analyses included age, site, residue, tissue correlations. Canada; Greenland; Northwest Atlantic; Arctic GC-EC
3851 Blood	a) 12 b) 8 Ingestion	a) Not given b) Not given	a) 0.01+/-0.00 mg/kg b) 0.01+/-0.02 mg/kg	a) Males b) Females DDT included metabolites 80% DDE, 13% p,p'-DDT, 5% p,p'-TDE, 2% o,p'-DDT. 1976-78 annual hunt. Statistical analyses included age, site, residue, tissue correlations. Canada; Greenland; Northwest Atlantic; Arctic GC-EC
3852 Brain	66 Ingestion	a) Not given b) Not given c) Not given d) Not given	a) 0.02+/-0.02 mg/kg b) 0.02+/-0.01 mg/kg c) 0.21+/-0.19 mg/kg d) 0.18+/-0.12 mg/kg	a) Males b) Females c) Males, extractable fat d) Females, extractable fat DDT included metabolites 80% DDE, 13% p,p'-DDT, 5% p,p'-TDE, 2% o,p'-DDT. 1976-78 annual hunt. Statistical analyses included age, site, residue, tissue correlations. Lowest levels bioaccumulation of tissue studied. Canada; Greenland; Northwest Atlantic; Arctic GC-EC
3853 Kidney	</-115 Ingestion	a) Not given b) Not given c) Not given d) Not given	a) 0.03+/-0.04 mg/kg b) 0.04+/-0.07 mg/kg c) 2.59+/-3.86 mg/kg d) 1.56+/-1.25 mg/kg	a) Males b) Females c) Males, extractable fat d) Females, extractable fat DDT included metabolites 80% DDE, 13% p,p'-DDT, 5% p,p'-TDE, 2% o,p'-DDT. 1976-78 annual hunt. Statistical analyses included age, site, residue, tissue correlations. Canada; Greenland; Northwest Atlantic; Arctic GC-EC

(next page)

DDT, total (No postings in CHEMLINE).
C14-H9-Cl5
MW 354.50

Seal, harp
PHOCA GROENLANDICA

(continued)

Tissue	Cases Exposure Route	Range	Mean	General Information
3854 Liver	109 Ingestion	a) Not given b) Not given c) Not given d) Not given	a) 0.06+/-0.10 mg/kg b) 0.03+/-0.04 mg/kg c) 3.65+/-6.59 mg/kg d) 1.62+/-1.70 mg/kg	a) Males b) Females c) Males, extractable fat d) Females, extractable fat DDT included metabolites 80% DDE, 13% p,p'-DDT, 5% p,p'-TDE, 2% o,p'-DDT. 1976-73 annual hunt. Statistical analyses included age, site, residue, tissue correlations. Canada; Greenland; Northwest Atlantic; Arctic GC-EC
3855 Muscle	111 Ingestion	a) Not given b) Not given c) Not given d) Not given	a) 0.08+/-0.23 mg/kg b) 0.03+/-0.03 mg/kg c) 3.66+/-5.84 mg/kg d) 2.17+/-1.84 mg/kg	a) Males b) Females c) Males, extractable fat d) Females, extractable fat DDT included metabolites 80% DDE, 13% p,p'-DDT, 5% p,p'-TDE, 2% o,p'-DDT. 1976-78 annual hunt. Statistical analyses included age, site, residue, tissue correlations. Canada; Greenland; Northwest Atlantic; Arctic GC-EC

SEALS; CHLORINE ORGANIC COMPOUNDS; ADIPOSE TISSUE; BLOOD; BRAIN; LIVER; KIDNEYS; MUSCLES; DDT; DIELDRIN; HEXACHLOROBENZENE; HEPTACHLOR EPOXIDE; ATLANTIC; ARCTIC; CANADA; BIOACCUMULATION; PESTICIDE RESIDUES; BIOLOGICAL MONITORING; AGE; GREENLAND; POLYCHLORINATED BIPHENYLS; SEX; METABOLITES; DDE; ENVIRONMENTAL EXPOSURE; WATER POLLUTION

Ronald, K.; Frank, R.J.; Dougan, J.L.; Frank, R.; Braun, H.E. 1984 Science of the Total Environment 38:133-152

Seal, Weddell
LEPTONYCHOTES WEDDELLI

Tissue	Cases Exposure Route	Range	Mean	General Information
3856 Adipose	a) 1 b) 1 c) 1	a) 94.9-101 ng/g b) 150-186 ng/g c) 23.4-24.2 ng/g Fresh wt	a) Not applicable b) Not applicable c) Not applicable	a) Female, age 3 yr + 11 mo, fat 77-89% b) Male, age 13 or 14 yr, fat 90-92% c) Male, newborn, fat 24-34%, collected 10/27/81 a) -b) collected 10/9/81. Antarctica, Syowa Station GC/MS

ADIPOSE TISSUE; SEALS; AQUATIC; TERRESTRIAL; ENVIRONMENTAL EXPOSURE; ANTARCTICA; CHLORINE ORGANIC COMPOUNDS; NONACHLOR; OXYCHLORDANE; DDT; POLYCHLORINATED BIPHENYLS; PESTICIDES; AIR POLLUTION; ATMOSPHERE; PESTICIDE RESIDUES; ARCTIC

Kawano, M.; Inoue, T.; Hidaka, H.; Tatsukawa, R. 1984 Chemosphere 13(1):95-100

DDT, total (No postings in CHEMLINE).
C14-H9-Cl5
MW 354.50

Sheep
OVIS sp.

Tissue	Cases Exposure Route	Range	Mean	General Information
3857 Adipose	a) 26 b) 29 c) 18 d) 29 e) 30	a) 20-125 ppb b) 20-200 ppb c) 25-70 ppb d) 30-130 ppb e) <5-50 ppb	a) 60 ppb b) 50 ppb c) 40 ppb d) 60 ppb e) 16 ppb	a) Biskra b) Chellala c) El-Eulama d) Souk-Ahras e) Tebessa Region of country in which animal was raised. Tebessa region has no annual insect-control program, other regions do. Algeria GC
ADIPOSE TISSUE; SHEEP; TERRESTRIAL; ENVIRONMENTAL EXPOSURE; ALGERIA; DDT; DDE; HEXACHLOROCYCLOHEXANE; LINDANE; BIOACCUMULATION				
Alamir, B.; Venant, A.; Bac, L.R. 1984 Archives of Toxicology Suppl. 7:451-452				

Shrew sp.
SOREX sp.

Tissue	Cases Exposure Route	Range	Mean	General Information
3858 Adipose	a) 1 b) 2	a) Not applicable b) 22.1-39.1 mg/kg	a) 77.3 mg/kg b) 30.6 mg/kg	a) 18 d nestling, 2.8 g b) Adults Pasture sprayed with [Cl-36]-DDT (1 kg/ha) in 6/69. Ohio, Urbana Scintillation counting
3859 Body, whole	a) 2 b) 2 c) 2 d) 2 e) 16 f) 33	a) 7-12 mg/kg b) Not given c) Not given d) Not given e) Not given f) Not given	a) 9.5 mg/kg b) 6.3+/-0.9 mg/kg c) 16.6 mg/kg d) 12 mg/kg e) 10.7+/-0.6 mg/kg f) 9.1+/-0.3 mg/kg S.E.	a) Embryos b) Newborn c) 6 d, 1.1 g d) 2-3.5 g e) Subadults, 2-3 g f) Adults, 3-5 g Significant difference ($P<0.05$) between e) and f). Pasture sprayed with [Cl-36]-DDT (1 kg/ha) in 6/69. Ohio, Urbana Scintillation counting
3860 Milk	2	Not given	16.7 mg/kg	0.05 g milk from stomachs of nestlings. Pasture sprayed with [Cl-36]-DDT (1 kg/ha) in 6/69. Ohio, Urbana Scintillation counting
ADIPOSE TISSUE; STOMACH; BODY; URINE; MILK; TERRESTRIAL; VOLES; SHREWS; OHIO; ADULTS; JUVENILES; NEWBORN; CHLORINATED HYDROCARBONS; CHLORINE ORGANIC COMPOUNDS; DDT; PESTICIDES; BIOACCUMULATION; PESTICIDE RESIDUES; POPULATION EXPOSURE; RADIONUCLIDES				
Forsyth, D.J.; Peterle, T.J. 1984 Environmental Pollution 33:327-340				

DDT, total (No postings in CHEMLINE).

C14-H9-Cl5
MW 354.50

Shrew, short-tailed
BLARINA BREVICAUDA

Tissue	Cases Exposure Route	Range	Mean	General Information
3861 Body, whole	a) 24 b) 31 c) 7	a) Not given b) Not given	a) 17.6+/-1.7 mg/kg b) 23.0+/-1.6 mg/kg c) 6.4 mg/kg S.E.	a) Adults b) Subadults c) Embryos Collected 1972-74. Significant difference ($P<0.05$) in concentrated [Cl-36]-DDT between age groups. Pasture sprayed (1 kg/ha) in 6/69. Ohio, Urbana Scintillation counting
3862 Stomach	a) 24 b) 31	a) Not given b) Not given	a) 13.4+/-1.2 mg/kg b) 13.0 +/-1.6 mg/kg S.E.	a) Adults b) Subadults Collected 1972-74. Pasture sprayed with [Cl-36]-DDT (1 kg/ha) in 6/69. Ohio, Urbana Scintillation counting
3863 Urine	a) 60 b) 58 c) 5	a) Not given b) Not given c) Not given	a) 16 mg/kg b) 16 mg/kg c) 5.7 mg/kg	a) Livetrapped, Oct b) Livetrapped, Nov b) Snaptrapped, 5 adult males Pasture sprayed with [Cl-36]-DDT (1 kg/ha) in 6/69. Ohio, Urbana Scintillation counting
ADIPOSE TISSUE; STOMACH; BODY; URINE; MILK; TERRESTRIAL; VOLES; SHREWS; OHIO; ADULTS; JUVENILES; NEWBORN; CHLORINATED HYDROCARBONS; CHLORINE ORGANIC COMPOUNDS; DDT; PESTICIDES; BIOACCUMULATION; PESTICIDE RESIDUES; POPULATION EXPOSURE; RADIONUCLIDES Forsyth, D.J.; Peterle, T.J. 1984 Environmental Pollution 33:327-340				

Shrimp, blue
PENAEUS STYLIROSTRIS

Tissue	Cases Exposure Route	Range	Mean	General Information
3864 Body	a) 12 b) 15 c) 51 d) 13	a) Not given b) Not given c) Not given d) Not given	a) 2.00 ppb b) 0.85 ppb c) 0.80 ppb d) 0.55 ppb Wet wt	a) Moron carit, 7/80 b) Yavaros, 10/80 c) Yararos, 10/81 d) Caimanero, 1/81. Mexico (NW), Sonora, Yavaros lagoon system; Mexico (NW), Sinaloa, Huizache-Caimanero lagoon system GC
CRUSTACEANS; MOLLUSKS; MUSCLES; CHLORINE ORGANIC COMPOUNDS; MEXICO; BODY; BIOACCUMULATION; FISHES; PESTICIDE RESIDUES; WATER POLLUTION; AQUATIC; ENVIRONMENTAL EXPOSURE Rosales, M.T.L.; Escalona, R.L. 1983 Bulletin of Environmental Contamination and Toxicology 30:456-463				

DDT, total (No postings in CHEMLINE).

C14-H9-Cl5
MW 354.50

Shrimp, rock
TRACHYPENAEUS SIMILIS PACIFICUS

Tissue	Cases Exposure Route	Range	Mean	General Information
3865 Body	3	Not given	0.55 ppb Wet wt	Collected 1/81. Mexico (NW), Sonora, Yavaros lagoon system GC
CRUSTACEANS; MOLLUSKS; MUSCLES; CHLORINE ORGANIC COMPOUNDS; MEXICO; BODY; BIOACCUMULATION; FISHES; PESTICIDE RESIDUES; WATER POLLUTION; AQUATIC; ENVIRONMENTAL EXPOSURE Rosales, M.T.L.; Escalona, R.L. 1983 Bulletin of Environmental Contamination and Toxicology 30:456-463				

Shrimp, white
PENAEUS VANAMEI

Tissue	Cases Exposure Route	Range	Mean	General Information
3866 Body	a) 12 b) 12	a) Not given b) Not given	a) 0.42 ppb b) 1.38 ppb Wet wt	a) Caimanero, 10/80 b) Moron carit, 7/81. Mexico (NW), Sonora, Yavaros lagoon system; Mexico (NW), Sinaloa, Huizache-Caimanero lagoon system GC
CRUSTACEANS; MOLLUSKS; MUSCLES; CHLORINE ORGANIC COMPOUNDS; MEXICO; BODY; BIOACCUMULATION; FISHES; PESTICIDE RESIDUES; WATER POLLUTION; AQUATIC; ENVIRONMENTAL EXPOSURE Rosales, M.T.L.; Escalona, R.L. 1983 Bulletin of Environmental Contamination and Toxicology 30:456-463				

Snake, water
NERODIA (NATRIX) RHOMBIFERA

Tissue	Cases Exposure Route	Range	Mean	General Information
3867 Adipose	21	0.14-1.77 ppm	Not given	Thomas Point, Brusly and Belle Helene sites, collected between 1977 & 79. Residue detected in 12 of 21. Range of means. Louisiana, Mississippi River, near Baton Rouge GC-EC
ADIPOSE TISSUE; LIVER; MUSCLES; BODY; SNAKES; AQUATIC; ENVIRONMENTAL EXPOSURE; LOUISIANA; CHLORINE ORGANIC COMPOUNDS; LINDANE; ALDRIN; DIELDRIN; HEPTACHLOR EPOXIDE; HEXACHLOROBENZENE; DDT; DDE; DDE; POLYCHLORINATED BIPHENYLS; FISHES; AGRICULTURE; BIOMAGNIFICATION; BIOCONCENTRATION; PESTICIDE RESIDUES; WATER POLLUTION Sabourin, T.D.; Stickle, W.B.; Michot, C.B.; Garton, D.W.; Mushinsky, H.R. 1984 Bulletin of Environmental Contamination and Toxicology 32:460-468				

DDT, total (No postings in CHEMLINE).
C14-H9-Cl5
MW 354.50

Snake, water
NERODIA (NATRIX) RHOMBIFERA

Tissue	Cases Exposure Route	Range	Mean	General Information
3868 Body	a) 4 b) 1	a) Not detected-0.96 ppm b) Not detected-0.05 ppm Wet wt	a) 0.07 ppm b) 0.03 ppm Wet wt	a) Lake Bruin, 3.7% lipids b) Lake St. John, 6.6% lipids Collected 6/15-9/25/80. Tertiary consumers, major foods are fish and frogs. Lakes acting as sumps. Louisiana GC
BODY; ENVIRONMENTAL EXPOSURE; LOUISIANA; CHLORINE ORGANIC COMPOUNDS; INSECTICIDES; BIOMAGNIFICATION; FISHES; AGRICULTURE; PESTICIDE RESIDUES; AQUATIC; TERRESTRIAL; BIRDS; SNAKES; FROGS; CRAYFISH Niethammer, K.R.; White, D.H.; Baskett, T.S.; Sayre, M.W. 1984 Archives of Contamination and Toxicology 13:63-74				

Squid
TODARODES PACIFICUS

Tissue	Cases Exposure Route	Range	Mean	General Information
3869 Body	5 Ingestion	16-28 ug/kg	22 ug/kg	Seawater levels 0.006-0.48 ng/l (mean 0.14 ng/l). Bioconcentration factor 160. Pacific Ocean GC-EC
BODY; BLUBBER; ENVIRONMENTAL EXPOSURE; FISHES; PACIFIC OCEAN; DDT; DDE; DDD; POLYCHLORINATED BIPHENYLS; HEXACHLOROCYCLOHEXANE; ANIMAL POPULATIONS; BIOACCUMULATION; WATER POLLUTION; ADIPOSE TISSUE Tanabe, S.; Tanaka, H.; Tatsukawa, R. 1984 Archives of Environmental Contamination and Toxicology 13:731-738				

Tissue	Cases Exposure Route	Range	Mean	General Information
3870 Body	1	Not applicable	7 ppb Wet wt	Purchased at market 7/82. 20 g edible tissue analysed. DDD, DDE included. Japan, Saniu GC/MS
BODY; AQUATIC; ENVIRONMENTAL EXPOSURE; JAPAN; BROMINATED HYDROCARBONS; BROMINE ORGANIC COMPOUNDS; CHLORINATED HYDROCARBONS; CHLORINE ORGANIC COMPOUNDS; DDD; DDE; DDT; HEXACHLOROCYCLOHEXANE; PESTICIDES; POLYCHLORINATED BIPHENYLS; BIOACCUMULATION; FISHES; PESTICIDE RESIDUES; WATER POLLUTION Watanabe, I.; Kashimoto, T.; Tatsukawa, R. 1983 Archives of Environmental Contamination and Toxicology 12:615-620				

DDT, total (No postings in CHEMLINE).
C14-H9-Cl5
MW 354.50
Tilapia
TILAPIA sp

Tissue	Cases Exposure Route	Range	Mean	General Information
3871 Muscle	Ingestion	a) 25.4-42.5 ug/L b) 51.0-177.6 ug/L c) 26.9-146.3 ug/L d) 93.1-206.2 ug/L e) 27.6-98.8 ug/L f) 9.8-101.1 ug/L g) 105.11-180.6 u/L h) 71.9-228.8 ug/L	a) 35.6 ug/L b) 114.6 ug/L c) 71.0 ug/L d) 113.0 ug/L e) 69.3 ug/L f) 75.4 ug/L g) 105.1 ug/L h) 141.1 ug/L	a) Aswan b) Assiut c) Cairo d) El-Mansora e) Paraskour f) Edfina g) El-Mahmodia canal h) Abo El-Gheit canal 80 composite samples, approx 5 fish each. Sites a) near Lake Nassar, e), f) near Mediterranean Sea on the Nile river, g), h) in agricultural areas polluted with pesticides (application, leachates). Egypt, Nile River and canals GC-EC

PESTICIDE RESIDUES; FISHES; MUSCLES; EGYPT; AQUATIC; CHLORINE ORGANIC COMPOUNDS; DDT; DDE; BIOLOGICAL MONITORING; WATER POLLUTION; METABOLITES; LINDANE; INSECTICIDES; ENVIRONMENTAL EXPOSURE; HEXACHLOROCYCLOHEXANE
Aly, O.A.; Badawy, M.I. 1984 Bulletin of Environmental Contamination and Toxicology 33:246-252

Vendace
COREGONUS ALBULA

Tissue	Cases Exposure Route	Range	Mean	General Information
3872 Muscle	25	Not given	0.020+/-0.016 mg/kg Wet wt	Collected at 12 sampling stations. Length 16-18 cm, wt 48.5-54.0 g, 1.31% fat. Finland GC/MS; GC-EC

LIVER; MUSCLES; COMPARATIVE EVALUATIONS; DDT; FINLAND; POLYCHLORINATED BIPHENYLS; FISHES; PESTICIDE RESIDUES; WATER POLLUTION; AQUATIC; ENVIRONMENTAL EXPOSURE; PESTICIDES
Pyysalo, H.; Wickstrom, K.; Litmanen, R. 1983 Chemosphere 12(6):837-842

DDT, total (No postings in CHEMLINE).

C14-H9-Cl5
MW 354.50
Vole, meadow
MICROTUS PENNSYLVANICUS

Tissue	Cases Exposure Route	Range	Mean	General Information
3873 Adipose	a) 18 b) 10	a) Not given b) Not given	a) 15.0+/-1.0 mg/kg b) 33.8+/-4.7 mg/kg S.E.	a) Nestlings 2-3 g b) Nestlings 4-5 g Subcutaneous fat. Collected Mar-Sept, 1972-74. Pasture sprayed with [Cl-36]-DDT (1 kg/ha) in 6/69. Ohio, Urbana Scintillation counting
3874 Body, whole	a) 9 b) 22 c) 43 d) 57	a) 3.0-11.0 mg/kg b) 5.0-19.5 mg/kg c) 1.0-22.5 mg/kg d) 0.3-12.5 mg/kg	a) 7.4 mg/kg b) 11.6 mg/kg c) 10.0 mg/kg d) 6.0 mg/kg	a) Embryos b) Nestlings c) Juveniles, recently weaned d) Adults >40 g Collected Mar-Sept, 1972-74. Pasture sprayed with [Cl-36]-DDT (1 kg/ha) in 6/69. Estimated from graph. Ohio, Urbana Scintillation counting
3875 Stomach	a) 57 b) 22	a) Not given b) Not given	a) 6.4+/-0.5 mg/kg b) 7.2+/-0.9 mg/kg S.E.	a) Adults 1972-74 b) Juveniles 1972-73 Significant difference ($P<0.05$) in concentrated [Cl-36]-DDT between age classes. Pasture sprayed (1 kg/ha) in 6/69. Ohio, Urbana Scintillation counting

ADIPOSE TISSUE; STOMACH; BODY; URINE; MILK; TERRESTRIAL; VOLES; SHREWS; OHIO; ADULTS; JUVENILES; NEWBORN; CHLORINATED HYDROCARBONS; CHLORINE ORGANIC COMPOUNDS; DDT; PESTICIDES; BIOACCUMULATION; PESTICIDE RESIDUES; POPULATION EXPOSURE; RADIONUCLIDES

Forsyth, D.J.; Peterle, T.J. 1984 Environmental Pollution 33:327-340

Zooplankton

Tissue	Cases Exposure Route	Range	Mean	General Information
3876 Body	Ingestion	Not given	1.7 ug/kg	Sample mainly copepods. Seawater levels 0.006-0.46 ng/l (mean 0.14 ng/l). Bioconcentration factor 12. Pacific Ocean GC-EC

BODY; BLUBBER; ENVIRONMENTAL EXPOSURE; FISHES; PACIFIC OCEAN; DDT; DDE; DDD; POLYCHLORINATED BIPHENYLS; HEXACHLOROCYCLOHEXANE; ANIMAL POPULATIONS; BIOACCUMULATION; WATER POLLUTION; ADIPOSE TISSUE

Tanabe, S.; Tanaka, H.; Tatsukawa, R. 1984 Archives of Environmental Contamination and Toxicology 13:731-738

Dibenzo-p-dioxin, 2,3,7,8-tetrachloro- (8 CI); Dibenzo(b,e)(1,4)dioxin, 2,3,7,8-tetrachloro- (9 CI)
1746-01-6
C12-H4-Cl4-O2
MW 322, MP 305 C

Bass, rock
AMBLOPLITES RUPESTRIS

Tissue	Cases Exposure Route	Range	Mean	General Information
3877 Muscle	1	Not given	12.0 ppt Parts/trillion	Collected in Cayuga Creek area New York, Niagara Falls CC
MICHIGAN; NEW YORK; BODY ; MUSCLES; BIOACCUMULATION; FISHES; WATER POLLUTION; CHLORINE ORGANIC COMPOUNDS; ENVIRONMENTAL EXPOSURE				
O'Keefe, P.; Meyer, C.; Hilker, D.; Aldous, K.; Jelus-Tyror, B.; Dillon, K.; Donnelly, R.; Horn, E.; Sloan, R. 1983 Chemosphere 12(3):325-332				

Bass, smallmouth
MICROPTERUS DOLOMIEUI

Tissue	Cases Exposure Route	Range	Mean	General Information
3878 Muscle	a) 3 b) 1	a) Not given b) Not given	a) 5.9+/-1.1 ppt b) 1.6 ppt Parts/trillion	a) Lake Ontario, 8/79 b) Lake Erie Great Lakes CC
MICHIGAN; NEW YORK; BODY ; MUSCLES; BIOACCUMULATION; FISHES; WATER POLLUTION; CHLORINE ORGANIC COMPOUNDS; ENVIRONMENTAL EXPOSURE				
O'Keefe, P.; Meyer, C.; Hilker, D.; Aldous, K.; Jelus-Tyror, B.; Dillon, K.; Donnelly, R.; Horn, E.; Sloan, R. 1983 Chemosphere 12(3):325-332				

Bass, striped
MORONE SAXATILIS

Tissue	Cases Exposure Route	Range	Mean	General Information
3879 Body	a) 9 b) 5 c) 4 d) 4 e) 5 f) 4 g) 2 h) 4	a) Not given b) Not detectable-2.0 pg/g (ppt) c) 2.0-5.0 pg/g d) Not detectable-39.0 pg/g e) 16-67 pg/g f) Not detectable-35.0 pg/g g) Not applicable h) Not detectable-3.5 pg/g	a) 22+/-8 pg/g (ppt) b) 0.4 pg/g c) 3.8 pg/g d) 12.2 pg/g e) 37.8 pg/g f) 16.8 pg/g g) 120.0 pg/g h) 2.1 pg/g	a) Hudson River, NY, 30-77 mi N of NYC, 4/81 b) RI coast, detected in only 1 fish, 11/82 c) RI coast d) Western LI Sound, NY, in 3 fish e) Newark Bay, NJ f) Hudson River, NY, 30 mi N of NYC, in 3 fish g) Hudson River, NY, 77 mi N of NYC h) Chesapeake Bay, MD, in 3 fish b-g) Collected 4-7/83. Levels significantly higher ($p < 0.001$) in Hudson River. Fish, sediment analyses indicated sources in lower, tidal section of river. New York; New Jersey; Maryland; Rhode Island MS
ADIPOSE TISSUE; BODY; FISHES; BIRDS; WATERFOWL; AQUATIC; ENVIRONMENTAL EXPOSURE; NEW JERSEY; NEW YORK; RHODE ISLAND; CHLORINE ORGANIC COMPOUNDS; BIOINDICATORS; BIOLOGICAL MONITORING; WATER POLLUTION; POLYCHLORINATED DIBENZOFURANS				
O'Keefe, P.; Hilker, D.; Meyer, C.; Aldous, K; Shane, L.; Donnelly, R.; Smith, R. 1984 Chemosphere 13:849-860				

Dibenzo-p-dioxin, 2,3,7,8-tetrachloro- (8 CI); Dibenzo(b,e)(1,4)dioxin, 2,3,7,8-tetrachloro- (9 CI)
1746-01-6
C12-H4-Cl4-O2
MW 322, MP 305 C

Bullhead, brown
AMEIURUS NEBULOSUS

Tissue	Cases Exposure Route	Range	Mean	General Information
3880 Muscle	3	Not given	3.6+/-1.2 ppt Parts/trillion	Collected 5/79 Great Lakes, Lake Ontario CC
MICHIGAN; NEW YORK; BODY ; MUSCLES; BIOACCUMULATION; FISHES; WATER POLLUTION; CHLORINE ORGANIC COMPOUNDS; ENVIRONMENTAL EXPOSURE O'Keefe, P.; Meyer, C.; Hilker, D.; Aldous, K.; Jelus-Tyror, B.; Dillon, K.; Donnelly, R.; Horn, E.; Sloan, R. 1983 Chemosphere 12(3):325-332				

Carp
CYPRINUS CARPIO

Tissue	Cases Exposure Route	Range	Mean	General Information
3881 Body	2	Not given	26.0+/-3.5 ppt Parts/trillion	Collected in Lake Huron Great Lakes CC
MICHIGAN; NEW YORK; BODY ; MUSCLES; BIOACCUMULATION; FISHES; WATER POLLUTION; CHLORINE ORGANIC COMPOUNDS; ENVIRONMENTAL EXPOSURE O'Keefe, P.; Meyer, C.; Hilker, D.; Aldous, K.; Jelus-Tyror, B.; Dillon, K.; Donnelly, R.; Horn, E.; Sloan, R. 1983 Chemosphere 12(3):325-332				

Catfish, channel
ICTALURUS PUNCTATUS

Tissue	Cases Exposure Route	Range	Mean	General Information
3882 Muscle	2	Not given	20.0+/-2.5 ppt Parts/trillion	Collected in Lake Huron Great Lakes CC
MICHIGAN; NEW YORK; BODY ; MUSCLES; BIOACCUMULATION; FISHES; WATER POLLUTION; CHLORINE ORGANIC COMPOUNDS; ENVIRONMENTAL EXPOSURE O'Keefe, P.; Meyer, C.; Hilker, D.; Aldous, K.; Jelus-Tyror, B.; Dillon, K.; Donnelly, R.; Horn, E.; Sloan, R. 1983 Chemosphere 12(3):325-332				

Goldfish
CARASSIUS AURATUS

Tissue	Cases Exposure Route	Range	Mean	General Information
3883 Body	3	Not given	1.0 pg/g (ppt)	Collected 9/81, composite sample of all fish. None detected in 5 goldfish and 5 carp (CYPRINUS CARPIO) from upper Hudson River (Waterford, NY), same date. Lower Hudson River near Albany, NY MS
ADIPOSE TISSUE; BODY; FISHES; BIRDS; WATERFOWL; AQUATIC; ENVIRONMENTAL EXPOSURE; NEW JERSEY; NEW YORK; RHODE ISLAND; CHLORINE ORGANIC COMPOUNDS; BIOINDICATORS; BIOLOGICAL MONITORING; WATER POLLUTION; POLYCHLORINATED DIBENZOFURANS O'Keefe, P.; Hilker, D.; Meyer, C.; Aldous, K; Shane, L.; Donnelly, R.; Smith, R. 1984 Chemosphere 13:849-860				

Dibenzo-p-dioxin, 2,3,7,8-tetrachloro- (8 CI); Dibenzo(b,e)(1,4)dioxin, 2,3,7,8-tetrachloro- (9 CI)
1746-01-6
C12-H4-Cl4-O2
MW 322, MP 305 C

Goldfish
CARASSIUS AURATUS

Tissue	Cases Exposure Route	Range	Mean	General Information
3884 Muscle	9	Not given	87.0+or-44.0 ppt Parts/trillion	Collected 6/80 New York, Niagara Falls, Cayuga Creek CC
MICHIGAN; NEW YORK; BODY ; MUSCLES; BIOACCUMULATION; FISHES; WATER POLLUTION; CHLORINE ORGANIC COMPOUNDS; ENVIRONMENTAL EXPOSURE O'Keefe, P.; Meyer, C.; Hilker, D.; Aldous, K.; Jelus-Tyror, B.; Dillon, K.; Donnelly, R.; Horn, E.; Sloan, R. 1983 Chemosphere 12(3):325-332				

Perch, white
MORONE AMERICANA

Tissue	Cases Exposure Route	Range	Mean	General Information
3885 Muscle	a) 4 b) 4	a) Not given b) Not given	a) 17+/-14 ppt b) 28+/-16 ppt Parts/trillion	a) 8/78 b) 5/79 Great Lakes, Lake Ontario CC
MICHIGAN; NEW YORK; BODY ; MUSCLES; BIOACCUMULATION; FISHES; WATER POLLUTION; CHLORINE ORGANIC COMPOUNDS; ENVIRONMENTAL EXPOSURE O'Keefe, P.; Meyer, C.; Hilker, D.; Aldous, K.; Jelus-Tyror, B.; Dillon, K.; Donnelly, R.; Horn, E.; Sloan, R. 1983 Chemosphere 12(3):325-332				

Pike, northern
ESOX LUCIUS

Tissue	Cases Exposure Route	Range	Mean	General Information
3886 Muscle	1	Not given	32 ppt Parts/trillion	Collected in Cayuga Creek area New York, Niagara Falls CC
MICHIGAN; NEW YORK; BODY ; MUSCLES; BIOACCUMULATION; FISHES; WATER POLLUTION; CHLORINE ORGANIC COMPOUNDS; ENVIRONMENTAL EXPOSURE O'Keefe, P.; Meyer, C.; Hilker, D.; Aldous, K.; Jelus-Tyror, B.; Dillon, K.; Donnelly, R.; Horn, E.; Sloan, R. 1983 Chemosphere 12(3):325-332				

Pike, walleye
STIZOSTEDION VITREUM

Tissue	Cases Exposure Route	Range	Mean	General Information
3887 Muscle	1	Not given	2.6 ppt Parts/trillion	Collected in Lake Erie Great Lakes CC
MICHIGAN; NEW YORK; BODY ; MUSCLES; BIOACCUMULATION; FISHES; WATER POLLUTION; CHLORINE ORGANIC COMPOUNDS; ENVIRONMENTAL EXPOSURE O'Keefe, P.; Meyer, C.; Hilker, D.; Aldous, K.; Jelus-Tyror, B.; Dillon, K.; Donnelly, R.; Horn, E.; Sloan, R. 1983 Chemosphere 12(3):325-332				

Dibenso-p-dioxin, 2,3,7,8-tetrachloro- (8 CI); Dibenzo(b,e)(1,4)dioxin, 2,3,7,8-tetrachloro- (9 CI)
1746-01-6
C12-H4-Cl4-O2
MW 322, MP 305 C

Pumpkinseed
LEPOMIS GIBBOSUS

Tissue	Cases Exposure Route	Range	Mean	General Information
3888 Muscle	1	Not given	31 ppt Parts/trillion	Collected in Cayuga Creek area New York, Niagara Falls CC
MICHIGAN; NEW YORK; BODY ; MUSCLES; BIOACCUMULATION; FISHES; WATER POLLUTION; CHLORINE ORGANIC COMPOUNDS; ENVIRONMENTAL EXPOSURE O'Keefe, P.; Meyer, C.; Hilker, D.; Aldous, K.; Jelus-Tyror, B.; Dillon, K.; Donnelly, R.; Horn, E.; Sloan, R. 1983 Chemosphere 12(3):325-332				

Salmon, Chinook
ONCORHYNCHUS TSHAWYTSCHA

Tissue	Cases Exposure Route	Range	Mean	General Information
3880 Muscle	a) 1 b) 1 c) 1	a) Not given b) Not given c) Not given	a) 39 ppt b) 39 ppt c) 26 ppt Parts/trillion	a) 10/78 b) 11/79 c) 11/79 Great Lakes, Lake Ontario CC
MICHIGAN; NEW YORK; BODY ; MUSCLES; BIOACCUMULATION; FISHES; WATER POLLUTION; CHLORINE ORGANIC COMPOUNDS; ENVIRONMENTAL EXPOSURE O'Keefe, P.; Meyer, C.; Hilker, D.; Aldous, K.; Jelus-Tyror, B.; Dillon, K.; Donnelly, R.; Horn, E.; Sloan, R. 1983 Chemosphere 12(3):325-332				

Salmon, coho
ONCORHYNCHUS KISUTCH

Tissue	Cases Exposure Route	Range	Mean	General Information
3890 Muscle	a) 2 b) 3 c) 5 d) 3	a) Not given b) Not given c) Not given d) Not given	a) 20 ppt b) 26+/-5.1 ppt c) 21+/-1.3 ppt d) 1.4+/-0.5 ppt Parts/trillion	a) Lake Ontario, 11/78 b) Lake Ontario, 9-10/79 c) Lake Ontario, 11/80 d) Lake Erie Great Lakes CC
MICHIGAN; NEW YORK; BODY ; MUSCLES; BIOACCUMULATION; FISHES; WATER POLLUTION; CHLORINE ORGANIC COMPOUNDS; ENVIRONMENTAL EXPOSURE O'Keefe, P.; Meyer, C.; Hilker, D.; Aldous, K.; Jelus-Tyror, B.; Dillon, K.; Donnelly, R.; Horn, E.; Sloan, R. 1983 Chemosphere 12(3):325-332				

Dibenzo-p-dioxin, 2,3,7,8-tetrachloro- (8 CI); Dibenzo(b,e)(1,4)dioxin, 2,3,7,8-tetrachloro- (9 CI)
1746-01-6
C12-H4-Cl4-O2
MW 322, MP 305 C

Snake
NERODIA RHOMBIFERA

Tissue	Cases Exposure Route	Range	Mean	General Information
3891 Adipose	a) 1 b) 1 c) 1 d) 1 e) 1 Ingestion	a) Not applicable b) Not applicable c) Not applicable d) Not applicable e) Not applicable	a) 38+/-7.3 ppt b) 378+/-140 ppt c) 500-1500 ppt d) 730+/-135 ppt e) 500-1500 ppt	5 snakes from 2 lakes. 500-1500 ppt levels estimated when 2 samples were outside the calibration range. Arkansas GC/MS
3892 Eggs	Ingestion	a) Not applicable b) Not applicable c) Not applicable	a) 251+/-48 ppt b) 151+/-20 ppt c) 294+/-61 ppt	Eggs from 1 snake. Approximately 1.5 eggs/analysis. Arkansas GC/MS

EGGS; ADIPOSE TISSUE; SNAKES; AQUATIC; ENVIRONMENTAL EXPOSURE; ARKANSAS; DIOXANES; CHLORINE ORGANIC COMPOUNDS; BIOACCUMULATION; INDUSTRIAL POLLUTION
Korfmacher, W.A.; Rowland, K.R.; Mitchum, R.K.; Daly, J.J.; McDaniel, R.C.; Plummer, M.V. 1984 Chemosphere 13(11):1229-1233

Sucker
CATOSTOMUS sp.

Tissue	Cases Exposure Route	Range	Mean	General Information
3893 Muscle	1	Not given	2.5 ppt Parts/trillion	Collected in Lake Huron Great Lakes GC

MICHIGAN; NEW YORK; BODY ; MUSCLES; BIOACCUMULATION; FISHES; WATER POLLUTION; CHLORINE ORGANIC COMPOUNDS; ENVIRONMENTAL EXPOSURE
O'Keefe, P.; Meyer, C.; Hilker, D.; Aldous, K.; Jelus-Tyror, B.; Dillon, K.; Donnelly, R.; Horn, E.; Sloan, R. 1983 Chemosphere 12(3):325-332

Sucker, white
CATOSTOMUS COMMERSONI

Tissue	Cases Exposure Route	Range	Mean	General Information
3894 Body	4	Not given	10+/-4.8 ppt Parts/trillion	Collected 6/79 Great Lakes, Lake Ontario GC

MICHIGAN; NEW YORK; BODY ; MUSCLES; BIOACCUMULATION; FISHES; WATER POLLUTION; CHLORINE ORGANIC COMPOUNDS; ENVIRONMENTAL EXPOSURE
O'Keefe, P.; Meyer, C.; Hilker, D.; Aldous, K.; Jelus-Tyror, B.; Dillon, K.; Donnelly, R.; Horn, E.; Sloan, R. 1983 Chemosphere 12(3):325-332

Dibenzo-p-dioxin, 2,3,7,8-tetrachloro- (8 CI); Dibenzo(b,e)(1,4)dioxin, 2,3,7,8-tetrachloro- (9 CI)
1746-01-6
C12-H4-Cl4-O2
MW 322, MP 305 C

Trout, brown
SALMO TRUTTA

Tissue	Cases Exposure Route	Range	Mean	General Information
3895 Muscle	a) 1 b) 1 c) 2 d) 1	a) Not given b) Not given c) Not given d) Not given	a) 162 ppt b) 30 ppt c) 11 ppt d) 8 ppt Parts/trillion	a) 5/78 b) 4/78 c) 3/78 d) 3/78 Great Lakes, Lake Ontario CC

MICHIGAN; NEW YORK; BODY ; MUSCLES; BIOACCUMULATION; FISHES; WATER POLLUTION; CHLORINE ORGANIC COMPOUNDS; ENVIRONMENTAL EXPOSURE
O'Keefe, P.; Meyer, C.; Hilker, D.; Aldous, K.; Jelus-Tyror, B.; Dillon, K.; Donnelly, R.; Horn, E.; Sloan, R. 1983 Chemosphere 12(3):325-332

Trout, lake
SALVELINUS NAMAYCUSH

Tissue	Cases Exposure Route	Range	Mean	General Information
3896 Body	a) 1 b) 3 c) 1	a) Not given b) Not given c) Not given	a) 107 ppt b) 51+/-18 ppt c) 21 ppt Parts/trillion	a) Lake Ontario, 9/78 b) Lake Ontario, 11/80 c) Lake Huron Great Lakes CC

MICHIGAN; NEW YORK; BODY ; MUSCLES; BIOACCUMULATION; FISHES; WATER POLLUTION; CHLORINE ORGANIC COMPOUNDS; ENVIRONMENTAL EXPOSURE
O'Keefe, P.; Meyer, C.; Hilker, D.; Aldous, K.; Jelus-Tyror, B.; Dillon, K.; Donnelly, R.; Horn, E.; Sloan, R. 1983 Chemosphere 12(3):325-332

Trout, rainbow
SALMO GAIRDNERI

Tissue	Cases Exposure Route	Range	Mean	General Information
3897 Muscle	a) 4 b) 1 c) 1	a) Not given b) Not given c) Not given	a) 17+/-6 ppt b) 32 ppt c) 1.0 ppt Parts/trillion	a) Lake Ontario, 10/79 b) Lake Ontario, 11/80 c) Lake Superior, 8/80 Great Lakes CC

MICHIGAN; NEW YORK; BODY ; MUSCLES; BIOACCUMULATION; FISHES; WATER POLLUTION; CHLORINE ORGANIC COMPOUNDS; ENVIRONMENTAL EXPOSURE
O'Keefe, P.; Meyer, C.; Hilker, D.; Aldous, K.; Jelus-Tyror, B.; Dillon, K.; Donnelly, R.; Horn, E.; Sloan, R. 1983 Chemosphere 12(3):325-333

Dibenzofuran, 2,3,7,8-tetrachloro-
51207-31-9
C12-H4-Cl4-O
MW 306

Bass, striped
MORONE SAXATILIS

Tissue	Cases Exposure Route	Range	Mean	General Information
3898 Body	a) 3 b) 5 c) 4 d) 4 e) 5 f) 4 g) 2 h) 4	a) Not given b) Not detectable-22 pg/g (ppt) c) 17-50 pg/g d) 13-22 pg/g e) 20-34 pg/g f) 16-72 pg/g g) 74-78 pg/g h) Not detectable-13 pg/g	a) 54 pg/g (ppt) b) 11.2 pg/g c) 26.5 pg/g d) 16.0 pg/g e) 27.6 pg/g f) 52.5 pg/g g) 76.0 pg/g h) 8.5 pg/g	a) Hudson River, NY, 30-77 mi N of NYC, 4/81 b) RI coast, detected in 4 fish, 11/82 c) RI coast d) Western LI Sound, NY e) Newark Bay, NJ f) Hudson River, NY, 30 mi N of NYC g) Hudson River, NY, 77 mi N of NYC h) Chesapeake Bay, MD, in 3 fish b-g) Collected 4-7/83. Levels significantly higher ($p<0.005$) in Hudson River. Fish, sediment analyses indicate sources in lower, tidal section of river. New York; New Jersey; Maryland; Rhode Island MS
ADIPOSE TISSUE; BODY; FISHES; BIRDS; WATERFOWL; AQUATIC; ENVIRONMENTAL EXPOSURE; NEW JERSEY; NEW YORK; RHODE ISLAND; CHLORINE ORGANIC COMPOUNDS; BIOINDICATORS; BIOLOGICAL MONITORING; WATER POLLUTION; POLYCHLORINATED DIBENZOFURANS O'Keefe, P.; Hilker, D.; Meyer, C.; Aldous, K; Shane, L.; Donnelly, R.; Smith, R. 1984 Chemosphere 13:849-860				

Carp
CYPRINUS CARPIO

Tissue	Cases Exposure Route	Range	Mean	General Information
3890 Body	5	Not given	5.0 pg/g (ppt)	Collected 9/81, composite sample of all fish. None detected in 5 and 3 goldfish (CARASSIUS AURATUS) from upper and lower Hudson River, respectively, same date. New York MS
ADIPOSE TISSUE; BODY; FISHES; BIRDS; WATERFOWL; AQUATIC; ENVIRONMENTAL EXPOSURE; NEW JERSEY; NEW YORK; RHODE ISLAND; CHLORINE ORGANIC COMPOUNDS; BIOINDICATORS; BIOLOGICAL MONITORING; WATER POLLUTION; POLYCHLORINATED DIBENZOFURANS O'Keefe, P.; Hilker, D.; Meyer, C.; Aldous, K; Shane, L.; Donnelly, R.; Smith, R. 1984 Chemosphere 13:849-860				

Duck, black
ANAS RUBRIPES

Tissue	Cases Exposure Route	Range	Mean	General Information
3900 Adipose	6	Not given	79.0 pg/g (ppt)	Source unknown, collected in migration (11/80). Composite sample of all birds. No 2,3,7,8-TCDD detected. Lower Hudson River (106 mi N of NYC) MS
ADIPOSE TISSUE; BODY; FISHES; BIRDS; WATERFOWL; AQUATIC; ENVIRONMENTAL EXPOSURE; NEW JERSEY; NEW YORK; RHODE ISLAND; CHLORINE ORGANIC COMPOUNDS; BIOINDICATORS; BIOLOGICAL MONITORING; WATER POLLUTION; POLYCHLORINATED DIBENZOFURANS O'Keefe, P.; Hilker, D.; Meyer, C.; Aldous, K; Shane, L.; Donnelly, R.; Smith, R. 1984 Chemosphere 13:849-860				

Dibenzofuran, 2,3,7,8-tetrachloro-
51207-31-9
C12-H4-Cl4-O
MW 306
Duck, mallard
ANAS PLATYRHYNCHOS

Tissue	Cases Exposure Route	Range	Mean	General Information
3901 Adipose	12	Not given	44.0 pg/g (ppt)	Source unknown, collected in migration (11/80). Composite sample of all birds. No 2,3,7,8-TCDD detected. Lower Hudson River (106 mi N of NYC) MS
ADIPOSE TISSUE; BODY; FISHES; BIRDS; WATERFOWL; AQUATIC; ENVIRONMENTAL EXPOSURE; NEW JERSEY; NEW YORK; RHODE ISLAND; CHLORINE ORGANIC COMPOUNDS; BIOINDICATORS; BIOLOGICAL MONITORING; WATER POLLUTION; POLYCHLORINATED DIBENZOFURANS O'Keefe, P.; Hilker, D.; Meyer, C.; Aldous, K; Shane, L.; Donnelly, R.; Smith, R. 1984 Chemosphere 13:849-860				

Duck, wood
AIX SPONSA

Tissue	Cases Exposure Route	Range	Mean	General Information
3902 Adipose	1	Not given	13.0 pg/g (ppt)	Source unknown, collected in migration (11/80). No 2,3,7,8-TCDD detected. Lower Hudson River (160 mi N of NYC) MS
ADIPOSE TISSUE; BODY; FISHES; BIRDS; WATERFOWL; AQUATIC; ENVIRONMENTAL EXPOSURE; NEW JERSEY; NEW YORK; RHODE ISLAND; CHLORINE ORGANIC COMPOUNDS; BIOINDICATORS; BIOLOGICAL MONITORING; WATER POLLUTION; POLYCHLORINATED DIBENZOFURANS O'Keefe, P.; Hilker, D.; Meyer, C.; Aldous, K; Shane, L.; Donnelly, R.; Smith, R. 1984 Chemosphere 13:849-860				

Distannoxane, hexabutyl-
56-35-9
C24-H54-O-Sn2
Crab
RHITHROPANOPEUS HARRISII

Tissue	Cases Exposure Route	Range	Mean	General Information
3903 Exoskeleton		a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given	a) 48 ng/g b) 136 ng/g c) 3 ng/g d) 10 ng/g e) 112 ng/g f) 146 ng/g Wet wt	a) Day 2 after feeding on shrimp containing 6200+/-1100 ng/g, water containing 0.28 ug/L b) Day 4 c) Day 2, not fed, water containing 0.28 ug/L d) Day 4 e) Day 2, not fed, water containing 6.1 ug/L f) Day 6 Measured in dorsal carapace California Liquid scintillation

(next page)

Distannoxane, hexabutyl-
56-35-9
C24-H54-O-Sn2
Crab
RHITHROPANOPEUS HARRISII

(continued)

Tissue	Cases Exposure Route	Range	Mean	General Information
3904 Gills		a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given	a) 157 ng/g b) 384 ng/g c) 16 ng/g d) 53 ng/g e) 470 ng/g f) 240 ng/g Wet wt	a) Day 2 after feeding on shrimp containing 6200+/-1100 ng/g, water containing 0.28 ug/L b) Day 4 c) Day 2, not fed, water containing 0.28 ug/L d) Day 4 e) Day 2, not fed, water containing 6.1 ug/L f) Day 6 California Liquid scintillation
3905 Hepatopancreas		a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given	a) 532 ng/g b) 1239 ng/g c) 7 ng/g d) 60 ng/g e) 19 ng/g f) 35 ng/g Wet wt	a) Day 2 after feeding on shrimp containing 6200+/-1100 ng/g, water containing 0.28 ug/L b) Day 4 c) Day 2, not fed, water containing 0.28 ug/L d) Day 4 e) Day 2, not fed, water containing 6.1 ug/L f) Day 6 California Liquid scintillation
3906 Muscle		a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given	a) 56 ng/g b) 198 ng/g c) 3 ng/g d) 0 ng/g e) 6 ng/g f) 9 ng/g Wet wt	a) Day 2 after feeding on shrimp containing 6200+/-1100 ng/g, water containing 0.28 ug/L b) Day 4 c) Day 2, not fed, water containing 0.28 ug/L d) Day 4 e) Day 2, not fed, water containing 6.1 ug/L f) Day 6 Measured in chelae. California Liquid scintillation
3907 Testis		a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given	a) 35 ng/g b) 278 ng/g c) 9 ng/g d) 10 ng/g e) 15 ng/g f) 4 ng/g Wet wt	a) Day 2 after feeding on shrimp containing 6200+/-1100 ng/g, water containing 0.28 ug/L b) Day 4 c) Day 2, not fed, water containing 0.28 ug/L d) Day 4 e) Day 2, not fed, water containing 6.1 ug/L f) Day 6 California Liquid scintillation

LIVER; PANCREAS; TESTES; MUSCLES; CRABS; AQUATIC; ENVIRONMENTAL EXPOSURE; DELIBERATE EXPOSURE; CALIFORNIA; BIOACCUMULATION; BIOMAGNIFICATION; BIOCONCENTRATION; PESTICIDES; PESTICIDE RESIDUES; GILLS

Evans, D.; Laughlin, R.B. 1984 Chemosphere 13(1):213-219

Dodecane
112-40-3
C12-H26
MW 170.3, MP -12 C, BP 216.2 C, VP 1 mm Hg at 47.8 C

Turtle, sea
CHELONIA MYDAS

Tissue	Cases Exposure Route	Range	Mean	General Information
3908 Liver	2	Not given	0.02 ug/g	Found dead after oilspill 6/79. Evidence of prolonged exposure to external oil Wt 1,025 and 990 g Mexico, Bay of Campeche, Laguna Madre General body condition poor GC-MS
MEXICO; LIVER; TURTLES; AQUATIC; HYDROCARBONS; BIOACCUMULATION; WATER POLLUTION; ENVIRONMENTAL EXPOSURE				
Hall, R.J.; Belisle, A.A.; Sileo, L. 1983 Journal of Wildlife Diseases 19(2):106-109				

Eicosane
112-95-8
C20-H42
MW 282.56, MP 36.8 C, BP 343 C

Turtle, sea
CHELONIA MYDAS

Tissue	Cases Exposure Route	Range	Mean	General Information
3909 Liver	2	Not given	0.03 ug/g	Found dead after oilspill 6/79. Evidence of prolonged exposure to external oil Wt 1,025 and 990 g Mexico, Bay of Campeche, Laguna Madre General body condition poor GC-MS
MEXICO; LIVER; TURTLES; AQUATIC; HYDROCARBONS; BIOACCUMULATION; WATER POLLUTION; ENVIRONMENTAL EXPOSURE				
Hall, R.J.; Belisle, A.A.; Sileo, L. 1983 Journal of Wildlife Diseases 19(2):106-109				

Erythromycin
114-07-8
C37-H67-N-O13
MW 733.92, MP 135-140 C, then resolidifies and melts again at 190-193 C

Sheep
OVIS sp.

Tissue	Cases Exposure Route	Range	Mean	General Information
3910 Blood, plasma	6	a) 5.34+/-1.63-0.77+/-0.18 mg/kg b) 3.63+/-0.90-0.52+/-0.10 mg/kg	a) Not applicable b) Not applicable	a) Grass hay diet b) 14% protein concentrate diet 12.5 mg/kg, IV. 1-6 hr after dose. Ranges of means. Microbiological
BLOOD PLASMA; GASTROINTESTINAL SYSTEM; STOMACH; DELIBERATE EXPOSURE; ANTIBIOTICS; DRUGS; ERYTHROMYCINS; ANIMAL FEEDS; BIOLOGICAL MONITORING; DIETS				
Wilson, R.C.; Huber, T.L.; Goetsch, D.D. 1984 American Journal of Veterinary Research 45(6):1148-1150				

Estra-4,9,11-trien-3-one, 17beta-hydroxy- (8 CI); Estra-4,9,11-trien-3-one, 17-hydroxy-, (17beta)- (9 CI)
10161-33-8
C18-H22-O2
MW 270.38, MP 186 C, also reported as 185-186 C

Cattle
BOS sp.

Tissue	Cases Exposure Route	Range	Mean	General Information
3911 Adipose	a) 6 b) 3 c) 6 d) 6 Implant	a) Not given b) Not given c) Not given d) Not given	a) 28 pg/g b) 3 pg/g c) 97 pg/g d) 108 pg/g	a) Controls, no trenbolone acetate (TBA) implant (16 pg/g) b) 9 mo (12 pg/g) c) 2 mo (73 pg/g) d) 9 and 2 mo (72 pg/g) In b)-d), times of TBA implant before slaughter of Friesian steers on 2-yr beef system. Antiserum to 17-beta-trenbolone in assay. Values in paretheses from assay with a specific antiserum. Ireland RIA
3912 Kidney	a) 6 b) 3 c) 6 d) 6 Implant	a) Not given b) Not given c) Not given d) Not given	a) 17 pg/g b) 5 pg/g c) 92 pg/g d) 48 pg/g	a) Controls, no trenbolone acetate (TBA) implant (8 pg/g) b) 9 mo (9 pg/g) c) 2 mo (79 pg/g) d) 9 and 2 mo (33 pg/g) In b)-d), times of TBA implant before slaughter of Friesian steers on 2-yr beef system. Antiserum to 17-beta-trenbolone in assay. Values in paretheses from assay with a specific antiserum. Ireland RIA
3913 Liver	a) 6 b) 3 c) 6 d) 6 Implant	a) Not given b) Not given c) Not given d) Not given	a) 73 pg/g b) 238 pg/g c) 207 pg/g d) 149 pg/g	a) Controls, no trenbolone acetate (TBA) implant (77 pg/g) b) 9 mo (294 pg/g) c) 2 mo (253 pg/g) d) 9 and 2 mo (123 pg/g) In b)-d), times of TBA implant before slaughter of Friesian steers on 2-yr beef system. Antiserum to 17-beta-trenbolone in assay. Values in paretheses from assay with a specific antiserum. Ireland RIA
3914 Muscle	a) 6 b) 3 c) 6 d) 6 Implant	a) Not given b) Not given c) Not given d) Not given	a) 20 pg/g b) 0 pg/g c) 60 pg/g d) 70 pg/g	a) Controls, no trenbolone acetate (TBA) implant (7 pg/g) b) 9 mo (8 pg/g) c) 2 mo (31 pg/g) d) 9 and 2 mo (38 pg/g) In b)-d), times of TBA implant before slaughter of Friesian steers on 2-yr beef system. Antiserum to 17-beta-trenbolone in assay. Values in paretheses from assay with a specific antiserum. Neck muscle. Corresponding values (pg/g) for diaphragm were: 13(3), 36(0), 58(29), 52(22). Ireland RIA

MUSCLES; KIDNEYS; LIVER; ADIPOSE TISSUE; TERRESTRIAL; DELIBERATE EXPOSURE; IRELAND; CATTLE; DRUGS

O'Keeffe, M. 1984 British Veterinary Journal 140:592-599

Estradiol (8 CI); Estra-1,3,5(10)-triene-3,17-diol, (17beta)- (9 CI)
50-28-2
C18-H24-O2
MW 272.42, MP 178-179 C

Chicken
GALLUS sp.

Tissue	Cases Exposure Route	Range	Mean	General Information
3018 Blood, plasma	24 Injection	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given g) Not given h) Not given	a) 107+/-75 pg/ml b) 346+/-161 pg/ml c) 190+/-60 pg/ml d) 1055+/-457 pg/ml e) 163+/-80 pg/ml f) 264+/-39 pg/ml g) 361+/-247 pg/ml h) 1292+/-615 pg/ml	a) Control, 5 adults, 0 d b) Control, 5 adults, 14 d c) Treatment, 6 adults, 0 d d) Treatment, 6 adults, 14 d e) Control, 6 juveniles, 0 d f) Control, 6 juveniles, 14 d g) Treatment, 7 juveniles, 0 d h) Treatment, 7 juveniles, 14 d Dose was 1 mg/kg/d for 14 d. Controls given propylene glycol (solvent). Illinois RIA
BLOOD PLASMA; DELIBERATE EXPOSURE; ILLINOIS; AGE; ADULTS; JUVENILES; HORMONES; BIOACCUMULATION; BIRDS; TERRESTRIAL				
Hagan, R.C.; Lesszczynski, D.E.; Kummerow, F.A. 1984 Toxicology and Applied Pharmacology 76:483-489				

Estrogens, conjugated (No postings in CHEMLINE).

Swine
SUS sp.

Tissue	Cases Exposure Route	Range	Mean	General Information
3016 Blood				Review. Clinical applications of prostaglandins. Chemistry, physiologic effects, endrocrinology, reproduction management, therapeutic uses, side effects discussed.
BLOOD; SWINE; TERRESTRIAL; REVIEW; HORMONES; DRUGS; DRUG THERAPY; BIOACCUMULATION; PREGNANCY				
Dial, G.D. 1984 Journal of American Veterinary Medical Association 185(12):1523-1530				

Ethane, hexachloro-
67-72-1
C2-Cl6
MW 236.74, MP 186.6 C (also reported as 186.8-187.4 C), BP 186.8 C (triple point), VP 1 mm Hg at 32.7 C

Trout, rainbow
SALMO GAIRDNERI

Tissue	Cases Exposure Route	Range	Mean	General Information
3017 Body		a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given g) Not given h) Not given i) Not given j) Not given	a) 0.06+/-0.04 ng/g b) 0.06+/-0.01 ng/g c) 0.06+/-0.04 ng/g d) 0.26+/-0.06 ng/g e) 0.20+/-0.08 ng/g f) 0.28+/-0.07 ng/g g) 3.7+/-2.3 ng/g h) 12+/-6.6 ng/g i) 7.1+/-2.1 ng/g j) 0.03 ng/g	a) Controls, day 0 b) Controls, day 34 c) Controls, day 119 d) 0.32+/-0.08 ng/L, day 8 e) day 69 f) day 119 g) 7.1+/-2.1 ng/L, day 7 h) day 43 i) day 105 j) Fish from Lake Ontario Water concentrations and exposure times d)-i). Hatchery reared, mean wt increase from 255 to 390 g during study a)-i). Mean wt j) 3100 g. Canada, Great Lakes, Gamaraska River GC-EC

CANADA; ADULTS; BODY; COMPARATIVE EVALUATIONS; CHLORINE ORGANIC COMPOUNDS; CHLOROBENZENES; BIOACCUMULATION; FISHES; WATER POLLUTION; AQUATIC; ENVIRONMENTAL EXPOSURE

Oliver, B.G.; Niimi, A.J. 1983 Environmental Science Technology 17:287-291

Ethane, 1,1-dichloro-2,2-bis(p-chlorphenyl)- (8 CI); Benzene, 1,1'-(2,2-dichloroethylidene)bis(4-chloro- (9 CI)
72-54-8
C14-H10-Cl4
MW 320.05, MP 109-110 C, BP 193 C at 1 mm Hg

Bass, largemouth
MICROPTERUS SALMOIDES

Tissue	Cases Exposure Route	Range	Mean	General Information
3018 Body	a) 5 b) 5	a) 1.41-2.56 ppm b) 1.28-2.80 ppm Wet wt	a) 1.94 ppm b) 2.02 ppm Wet wt	a) Lake Providence, 7.3% lipids b) Lake Bruin, 9.2% lipids Collected 6/15-6/25/80. Tertiary consumers, major foods are fish and crayfish. Lakes acting as sumps. Louisiana GC

BODY; ENVIRONMENTAL EXPOSURE; LOUISIANA; CHLORINE ORGANIC COMPOUNDS; INSECTICIDES; BIOMAGNIFICATION; FISHES; AGRICULTURE; PESTICIDE RESIDUES; AQUATIC; TERRESTRIAL; BIRDS; SNAKES; FROGS; CRAYFISH

Niethammer, K.R.; White, D.H.; Baskett, T.S.; Sayre, M.W. 1984 Archives of Contamination and Toxicology 13:63-74

Ethane, 1,1-dichloro-2,2-bis(p-chlorphenyl)- (8 CI); Benzene, 1,1'-(2,2-dichloroethylidene)bis(4-chloro- (9 CI)
72-54-8
C14-H10-Cl4
MW 320.05, MP 109-110 C, BP 193 C at 1 mm Hg

Bluegill
LEPOMIS MACROCHIRUS

Tissue	Cases Exposure Route	Range	Mean	General Information
3019 Body	a) 5 b) 5	a) 0.62-2.02 ppm b) 0.12-0.31 ppm Wet wt	a) 0.96 ppm b) 0.23 ppm Wet wt	a) Lake Providence, 3.3% lipids b) Lake Bruin, 2.2% lipids Collected 6/15-9/25/80. Secondary consumers, major foods are fish. Lakes acting as sumps. Louisiana GC

BODY; ENVIRONMENTAL EXPOSURE; LOUISIANA; CHLORINE ORGANIC COMPOUNDS; INSECTICIDES; BIOMAGNIFICATION; FISHES; AGRICULTURE; PESTICIDE RESIDUES; AQUATIC; TERRESTRIAL; BIRDS; SNAKES; FROGS; CRAYFISH
Niethammer, K.R.; White, D.H.; Baskett, T.S.; Sayre, M.W. 1984 Archives of Contamination and Toxicology 13:63-74

Catfish, channel
ICTALURUS PUNETATUS

Tissue	Cases Exposure Route	Range	Mean	General Information
3020 Body	4	0.44-3.79 ppm Wet wt	1.57 ppm Wet wt	Lake Providence, 2.9% lipids. Collected 6/15-9/25/80. Tertiary consumers, major foods are fish and insects. Lakes acting as sumps. Louisiana GC

BODY; ENVIRONMENTAL EXPOSURE; LOUISIANA; CHLORINE ORGANIC COMPOUNDS; INSECTICIDES, BIOMAGNIFICATION; FISHES; AGRICULTURE; PESTICIDE RESIDUES; AQUATIC; TERRESTRIAL; BIRDS; SNAKES; FROGS; CRAYFISH
Niethammer, K.R.; White, D.H.; Baskett, T.S.; Sayre, M.W. 1984 Archives of Contamination and Toxicology 13:63-74

Clam, Asiatic
CORBICULA MANILENSIS

Tissue	Cases Exposure Route	Range	Mean	General Information
3021 Body, whole	9	2.8-44 ug/kg Dry wt	8 ug/kg Dry wt Median	Trend in concentration increase from inorganic to organic to living material. August 1979-May 1980, sampling dates. Non-point sources. No significant seasonal, temporal or spatial variability reported. Florida, Apalachicola River GC-EC

BODY; ASIATIC CLAM; AQUATIC; ENVIRONMENTAL EXPOSURE; FLORIDA; TRACE ELEMENTS; PESTICIDES; POLYCHLORINATED BIPHENYLS; CHROMIUM; COPPER; LEAD; MANGANESE; MERCURY; ZINC; DDD; ORGANOPHOSPHATES; DDE; DDT; DIELDRIN; HEPTACHLOR EPOXIDE; INSECTICIDES; GEOLOGY
Elder, J.F.; Mattraw, H.C. 1984 Archives of Environmental Contamination and Toxicology 13:453-469

Ethane, 1,1-dichloro-2,2-bis(p-chlorphenyl)- (8 CI); Benzene, 1,1'-(2,2-dichloroethylidene)bis(4-chloro- (9 CI)
72-54-8
C14-H10-Cl4
MW 320.06, MP 109-110 C, BP 193 C at 1 mm Hg

Clam, hard-shell
MERCENARIA MERCENARIA

Tissue	Cases Exposure Route	Range	Mean	General Information
3022 Body	a) 215 b) 138 c) 96 d) 262 e) 379 Ingestion	a) Not detected-0.007 ug/g b) 0.001-0.040 ug/g c) Not detected-0.050 ug/g d) Not detected-0.040 ug/g e) Trace-0.007 ug/g Wet wt	a) 0.004 ug/g b) 0.010 ug/g c) 0.009 ug/g d) 0.008 ug/g e) 0.003 ug/g Wet wt	a) 1976 b) 1977 c) 1978 d) 1979 e) 1980 Data include soft-shell clam, MYA ARENARIA. Biological monitoring for organochlorine residues in shellfish, 1976-1980. Virtually all values below FDA guidelines or safe levels. Sample size small, no yearly periodic variation after 1976. Maryland, Chesapeake Bay area, tributaries GC-EC

CLAMS; CRABS; SHELLFISH; OYSTERS; MARYLAND; CHESAPEAKE BAY; BIOLOGICAL MONITORING; BIOCONCENTRATION; WATER POLLUTION; FOOD CONTAMINATION; CHLORINE ORGANIC COMPOUNDS; DDD; DDE; POLYCHLORINATED BIPHENYLS; CHLORDANE; DIELDRIN; BHC; AQUATIC; ENVIRONMENTAL EXPOSURE
Eisenberg, M.; Topping, J.J. 1984 Journal of Environmental Science and Health B19(7):673-688

Clam, soft-shell
MYA ARENARIA

Tissue	Cases Exposure Route	Range	Mean	General Information
3022 Body	a) 26 b) 7 c) 18 d) 115 e) 34 Ingestion	a) Not detected-0.037 ug/g b) 0.001-0.040 ug/g c) Not detected-0.050 ug/g d) Not detected-0.040 ug/g e) Trace-0.007 ug/g Wet wt	a) 0.004 ug/g b) 0.010 ug/g c) 0.009 ug/g d) 0.008 ug/g e) 0.003 ug/g Wet wt	a) 1976 b) 1977 c) 1978 d) 1979 e) 1980 Data include hard-shell clam, MERCENARIA MERCENARIA. Biological monitoring for organochlorine residues in shellfish 1976-1980. Virtually all values below FDA guidelines or safe levels. Sample size small, no yearly periodic variation. Maryland, Chesapeake Bay area, tributaries GC-EC

CLAMS; CRABS; SHELLFISH; OYSTERS; MARYLAND; CHESAPEAKE BAY; BIOLOGICAL MONITORING; BIOCONCENTRATION; WATER POLLUTION; FOOD CONTAMINATION; CHLORINE ORGANIC COMPOUNDS; DDD; DDE; POLYCHLORINATED BIPHENYLS; CHLORDANE; DIELDRIN; BHC; AQUATIC; ENVIRONMENTAL EXPOSURE
Eisenberg, M.; Topping, J.J. 1984 Journal of Environmental Science and Health B19(7):673-688

Ethane, 1,1-dichloro-2,2-bis(p-chlorphenyl)- (8 CI); Benzene, 1,1'-(2,2-dichloroethylidene)bis(4-chloro- (9 CI)
72-54-8
C14-H10-Cl4
MW 320.05, MP 109-110 C, BP 193 C at 1 mm Hg

Coot, American
FULICA AMERICANA

Tissue	Cases Exposure Route	Range	Mean	General Information
3024 Body	4	0.06-0.17 ppm Wet wt	0.09 ppm Wet wt	Lake Providence, 10.6% lipids. Collected 2/80. Secondary consumers. Lakes acting as sumps. Louisiana GC
BODY; ENVIRONMENTAL EXPOSURE; LOUISIANA; CHLORINE ORGANIC COMPOUNDS; INSECTICIDES; BIOMAGNIFICATION; FISHES; AGRICULTURE; PESTICIDE RESIDUES; AQUATIC; TERRESTRIAL; BIRDS; SNAKES; FROGS; CRAYFISH				
Niethammer, K.R.; White, D.H.; Baskett, T.S.; Sayre, M.W. 1984 Archives of Contamination and Toxicology 13:63-74				

Cottonmouth
AGKISTRODON PISCIVORUS

Tissue	Cases Exposure Route	Range	Mean	General Information
3025 Body	a) 9 b) 6	a) Not detected-0.46 ppm b) Not detected-0.10 ppm Wet wt	a) 0.09 ppm b) 0.05 ppm Wet wt	a) Lake Providence, 4.3% lipids b) Lake Bruin, 2.5% lipids Collected 6/15-9/25/80. Tertiary consumers, major foods are snakes, fish and frogs. Lakes acting as sumps. Louisiana GC
BODY; ENVIRONMENTAL EXPOSURE; LOUISIANA; CHLORINE ORGANIC COMPOUNDS; INSECTICIDES; BIOMAGNIFICATION; FISHES; AGRICULTURE; PESTICIDE RESIDUES; AQUATIC; TERRESTRIAL; BIRDS; SNAKES; FROGS; CRAYFISH				
Niethammer, K.R.; White, D.H.; Baskett, T.S.; Sayre, M.W. 1984 Archives of Contamination and Toxicology 13:63-74				

Crab, blue
CALLINECTES SAPIDUS

Tissue	Cases Exposure Route	Range	Mean	General Information
3026 Body	a) 3 b) 9 c) 22 Ingestion	a) Not detected-0.005 ug/g b) Not detected-0.030 ug/g c) Not detected-0.010 ug/g Wet wt	a) 0.002 ug/g b) 0.004 ug/g c) 0.002 ug/g Wet wt	a) 1976 b) 1979 c) 1980 Biological monitoring for organochlorine residues in shellfish, 1976-1980. Virtually all values below FDA guidelines or safe levels. Sample size small (none 1978), mostly in 1979-1980, not possible to see yearly trend. Data not available 1977. Maryland, Chesapeake Bay area, tributaries GC-EC
CLAMS; CRABS; SHELLFISH; OYSTERS; MARYLAND; CHESAPEAKE BAY; BIOLOGICAL MONITORING; BIOCONCENTRATION; WATER POLLUTION; FOOD CONTAMINATION; CHLORINE ORGANIC COMPOUNDS; DDD; DDE; POLYCHLORINATED BIPHENYLS; CHLORDANE; DIELDRIN; BHC; AQUATIC; ENVIRONMENTAL EXPOSURE				
Eisenberg, M.; Topping, J.J. 1984 Journal of Environmental Science and Health B19(7):673-688				

Ethane, 1,1-dichloro-2,2-bis(p-chlorphenyl)- (8 CI); Benzene, 1,1'-(2,2-dichloroethylidene)bis(4-chloro- (9 CI)
72-54-8
C14-H10-Cl4
MW 320.05, MP 109-110 C, BP 193 C at 1 mm Hg

Eagle, bald
HALIAEETUS LEUCOCEPHALUS

Tissue	Cases Exposure Route	Range	Mean	General Information
3927 Eggs	115	a) Not applicable b) 0.11-0.14 ppm c) 0.11-0.14 ppm d) 0.02-0.63 ppm e) 0.04-0.81 ppm f) 0.12-1.20 ppm g) 2.0-2.4 ppm h) 0.59-0.99 ppm i) 0.07-0.71 ppm j) 2.7-4.1 ppm k) 0.21-1.60 ppm l) 0.65-3.7 ppm m) Not applicable n) 0.07-0.61 ppm Fresh wet wt	a) 0.21 ppm 0.13 ppm c) 0.13 ppm d) 0.19 ppm e) 0.27 ppm f) 0.51 ppm g) 2.2 ppm h) 0.77 ppm i) 0.41 ppm j) 3.4 ppm k) 0.97 ppm l) 1.65 ppm m) 0.47 ppm n) 0.21 ppm Fresh wet wt	a) OR, 1979, 1 egg b) CA, 1977, 2 eggs c) AZ, 1977, 3 eggs d) MN, 1972, 1976-79, 14 eggs e) WI, 1976-79, 36 eggs f) MI, 1969, 1974, 1978, 4 eggs g) OH, 1976, 2 eggs h) NY, 1971, 1977-78, 3 eggs i) ME, 1974-79, 19 eggs j) DE, 1977-78, 3 eggs k) MD, 1973, 1977-79, 11 eggs l) VA, 1976-77, 11 eggs m) LA, 1979, 1 egg n) FL, 1975-77, 1979, 5 eggs In nearly all eggs from all areas, except Alaska. Highest levels in Chesapeake Bay area. Residues generally declining with time. GC-EC; GC-MS; Silica gel chromatography

EGGS; EAGLES; BIRDS; ENVIRONMENTAL EXPOSURE; ALASKA; ARIZONA; CALIFORNIA; DELAWARE; FLORIDA; LOUISIANA; MAINE; MARYLAND; MICHIGAN; MINNESOTA; NEW YORK; OHIO; OREGON; VIRGINIA; WISCONSIN; UNITED STATES; CHLORINATED HYDROCARBONS; CHLORINE ORGANIC COMPOUNDS; DDD; DDE; DDT; DIELDRIN; HEXACHLOROBENZENE; INSECTICIDES; MERCURY; PESTICIDES; POLYCHLORINATED BIPHENYLS; BIOACCUMULATION; PESTICIDE RESIDUES; POPULATION EXPOSURE

Wiemeyer, S.N.; Lamont, T.G.; Bunck, C.M.; Sindelar, C.R.; Gramlich, F.J.; Fraser, J.D.; Byrd, M.A. 1984 Archives of Environmental Contamination and Toxicology 13:529-549

Eagle, booted
HIERAETUS PENNATUS

Tissue	Cases Exposure Route	Range	Mean	General Information
3928 Eggs	1 Ingestion	Not given	0.045 ppm Wet wt	Collected in 1981. Spain GLC

EGGS; ENVIRONMENTAL EXPOSURE; SPAIN; ADULTS; METAL POISONING; DDE; DDD; DDT; DIELDRIN; HEXACHLOROCYCLOHEXANE; HEPTACHLOR EPOXIDE; ALDRIN; POLYCHLORINATED BIPHENYLS; MERCURY; LEAD; CADMIUM; COPPER; ZINC; BIOACCUMULATION; BIOCONCENTRATION; HEALTH HAZARDS; PESTICIDE RESIDUES; BIRDS; TERRESTRIAL

Gonzales, M.J.; Hernandez, L.M.; Rico, M.C.; Baluja, G. 1984 Journal of Environmental Health and Science

Ethane, 1,1-dichloro-2,2-bis(p-chlorphenyl)- (8 CI); Benzene, 1,1'-(2,2-dichloroethylidene)bis(4-chloro- (9 CI)
72-54-8
C14-H10-Cl4
MW 320.05, MP 109-110 C, BP 193 C at 1 mm Hg

Eagle, imperial
AQUILA HELIACA

Tissue	Cases Exposure Route	Range	Mean	General Information
3929 Eggs	a) 6 b) 3 c) 8 d) 10 Ingestion	a) Not given b) Not given c) Not given d) Not given	a) 0.095 ppm b) 0.006 ppm c) 0.022 ppm d) 0.002 ppm Wet wt	a) Collected 1980 b) 1981 c) 1982 d) 1983. Spain GLC

EGGS; ENVIRONMENTAL EXPOSURE; SPAIN; ADULTS; METAL POISONING; DDE; DDD; DDT; DIELDRIN; HEXACHLOROCYCLOHEXANE; HEPTACHLOR EPOXIDE; ALDRIN; POLYCHLORINATED BIPHENYLS; MERCURY; LEAD; CADMIUM; COPPER; ZINC; BIOACCUMULATION; BIOCONCENTRATION; HEALTH HAZARDS; PESTICIDE RESIDUES; BIRDS; TERRESTRIAL
Gonzales, M.J.; Hernandez, L.M.; Rico, M.C.; Baluja, G. 1984 Journal of Environmental Health and Science

Gar, spotted
LEPISOSTEUS OCULATUS

Tissue	Cases Exposure Route	Range	Mean	General Information
3930 Body	a) 1 b) 5	a) Not given b) 0.51-3.84 ppm Wet wt	a) 5.90 ppm b) 1.33 ppm Wet wt	a) Lake Providence, 11.1% lipids b) Lake Bruin, 2.7% lipids Collected 6/15-9/25/80. Tertiary consumers, major foods are fish. Lakes acting as sumps. Louisiana GC

BODY; ENVIRONMENTAL EXPOSURE; LOUISIANA; CHLORINE ORGANIC COMPOUNDS; INSECTICIDES; BIOMAGNIFICATION; FISHES; AGRICULTURE; PESTICIDE RESIDUES; AQUATIC; TERRESTRIAL; BIRDS; SNAKES; FROGS; CRAYFISH
Niethammer, K.R.; White, D.H.; Baskett, T.S.; Sayre, M.W. 1984 Archives of Contamination and Toxicology 13:63-74

Goldeye
HIODON ALOSOIDES

Tissue	Cases Exposure Route	Range	Mean	General Information
3931 Adipose	a) 135 b) 16 c) 39 Ingestion	a) 0.020-0.320 mg/kg b) Not detected-0.006 mg/kg c) 0.012-0.160 Wet wt	a) 0.176 mg/kg b) 0.001 mg/kg c) 0.052 mg/kg Wet wt	a) North Saskatchewan River below Edmonton b) Red Deer River below city of Red Deer c) South Saskatchewan River Intestinal fat. Canada, Alberta GC-EC

FISHES; CANADA; PESTICIDE RESIDUES; CHLORINE ORGANIC COMPOUNDS; POLYCHLORINATED BIPHENYLS; BIOLOGICAL MONITORING; AQUATIC; BIOCONCENTRATION; ENVIRONMENTAL EXPOSURE; WATER POLLUTION; POLYCHLORINATED BIPHENYLS; DDE; DDD; DIELDRIN; HEXACHLOROBENZENE; HEXACHLOROCYCLOHEXANE
Chovelon, A.; George, L.; Gulayets, C.; Hoyano, Y.; McGuinness, E.; Moore, J.; Ramamoorthy, S.; Ramamoorthy, S.; Singer, P.; Smiley, K.; Wheatly A. 1984 Chemosphere 13(1)19-32

Ethane, 1,1-dichloro-2,2-bis(p-chlorphenyl)- (8 CI); Benzene, 1,1'-(2,2-dichloroethylidene)bis(4-chloro- (9 CI)
72-54-8
C14-H10-Cl4
MW 320.05, MP 109-110 C, BP 193 C at 1 mm Hg

Heron, black-crowned night
NYCTICORAX NYCTICORAX

Tissue	Cases Exposure Route	Range	Mean	General Information
3032 Eggs	147	0.07-1.9 ppm	0.26 ppm Geometric mean	Collected between May 17 and June 1, 1979. Possible sources: nesting and feeding habitats, or migration routes and wintering grounds in Mexico. Colorado; Wyoming GC; EC

EGGS; BIRDS; ENVIRONMENTAL EXPOSURE; COLORADO; WYOMING; CHLORINE ORGANIC COMPOUNDS; DDD; DDE; DDT; DIELDRIN; HEPTACHLOR EPOXIDE; OXYCHLORDANE; NONACHLOR; HEXACHLOROBENZENE; HEXACHLOROCYCLOHEXANE; POLYCHLORINATED BIPHENYLS; ANIMAL POPULATIONS; BIOLOGICAL MONITORING; PESTICIDE RESIDUES; LAND POLLUTION; WATER POLLUTION; AQUATIC

McEwen, L.C.; Stafford, C.J.; Hensler, G.L 1984 Environmental Toxicology and Chemistry 3:367-376

Heron, green-backed
BUTORIDES STRIATUS

Tissue	Cases Exposure Route	Range	Mean	General Information
3033 Adipose	4 Ingestion	Not given	6.62 ppm Wet wt	Composite from birds shot 1980. Residues linked to fish diet. Louisiana, Lake Providence GC; GC/MS
3034 Body	a) 12 b) 14 Ingestion	a) 0.06-2.54 ppm b) Not detected-2.26 ppm Wet wt	a) 0.49 ppm b) 0.30 ppm Wet wt Geometric means	a) Adults, mean lipid 16.2% b) Immature, mean lipid 14.8%, 12 had detectable levels Collected (shot) in 1980. Beak, feet, wing tips, skin, GI tract removed before homogenization. Residues linked to fish diet. Louisiana, Lake Province, Lake Bruin, Lake St. John GC; GC/MS

CHLORINE ORGANIC COMPOUNDS; FISHES; LOUISIANA; PESTICIDE RESIDUES; BIOACCUMULATION; DIETS; ADIPOSE TISSUE; LIVER; MUSCLES; BRAIN; BIOLOGICAL MONITORING; ENVIRONMENTAL EXPOSURE; BIRDS; WATERFOWL; AQUATIC; TERRESTRIAL; WATER POLLUTION; DDD; DDE; DDT; DIELDRIN; POLYCHLORINATED BIPHENYLS

Niethammer, K.R.; Baskett, T.S.; White, D.H. 1984 Bulletin of Environmental Contamination and Toxicology 33:491-498

Tissue	Cases Exposure Route	Range	Mean	General Information
3035 Body	a) 10 b) 9 c) 5	a) 0.51-2.54 ppm b) Not detected-2.19 ppm c) Not detected-0.23 ppm Wet wt	a) 1.20 ppm b) 0.42 ppm c) 0.08 ppm Wet wt	a) Lake Providence, 11.4% lipids b) Lake Bruin, 12.9% lipids c) Lake St. John, 26.7% lipids Collected between 6/15-9/25/80. Tertiary consumers, major foods are fish. Lakes acting as sumps. Immature birds are good monitors of contamination. Louisiana GC

BODY; ENVIRONMENTAL EXPOSURE; LOUISIANA, CHLORINE ORGANIC COMPOUNDS; INSECTICIDES; BIOMAGNIFICATION; FISHES; AGRICULTURE; PESTICIDE RESIDUES; AQUATIC; TERRESTRIAL; BIRDS; SNAKES; FROGS; CRAYFISH

Niethammer, K.R.; White, D.H.; Baskett, T.S.; Sayre, M.W. 1984 Archives of Contamination and Toxicology 13:63-74

Ethane, 1,1-dichloro-2,2-bis(p-chlorphenyl)- (8 CI); Benzene, 1,1'-(2,2-dichloroethylidene)bis(4-chloro- (9 CI)
72-54-8
C14-H10-Cl4
MW 320.05, MP 109-110 C, BP 193 C at 1 mm Hg

Heron, green-backed
BUTORIDES STRIATUS

Tissue	Cases Exposure Route	Range	Mean	General Information
3936 Brain	4 Ingestion	Not given	0.05 ppm Wet wt	Composite from birds shot in 1980. Residues linked to fish diet. Louisiana, Lake Providence GC; GC/MS
3937 Liver	4 Ingestion	Not given	0.37 ppm Wet wt	Composite from birds shot in 1980. Residues linked to fish diet. Louisiana, Lake Providence GC; GC/MS
3938 Muscle	4 Ingestion	Not given	0.14 ppm Wet wt	Composite from birds shot in 1980. Residues linked to fish diet. Louisiana, Lake Providence GC; GC/MS

CHLORINE ORGANIC COMPOUNDS; FISHES; LOUISIANA; PESTICIDE RESIDUES; BIOACCUMULATION; DIETS; ADIPOSE TISSUE; LIVER; MUSCLES; BRAIN; BIOLOGICAL MONITORING; ENVIRONMENTAL EXPOSURE; BIRDS; WATERFOWL; AQUATIC; TERRESTRIAL; WATER POLLUTION; DDD; DDE; DDT; DIELDRIN; POLYCHLORINATED BIPHENYLS
Niethammer, K.R.; Baskett, T.S.; White, D.H. 1984 Bulletin of Environmental Contamination and Toxicology 33:491-498

Heron, little blue
EGRETTA CAERULEA

Tissue	Cases Exposure Route	Range	Mean	General Information
3939 Body	a) 6 b) 15 Ingestion	a) 0.13-1.78 ppm b) Not detected-0.62 ppm Wet wt	a) 0.40 ppm b) 0.11 ppm Wet wt Geometric means	a) Adult, mean lipid 10.8% b) Immature, 12 had detectable levels, mean lipid 8.2% Collected (shot) 1980. Beak, feet, skin, wing tips and GI tract removed before homogenization. Moderate residues linked to mixed diet of fish, crustaceans, and insects. Louisana, Lake Providence, Lake Bruin, Lake St. John GC; GC/MS

CHLORINE ORGANIC COMPOUNDS; FISHES; LOUISIANA; PESTICIDE RESIDUES; BIOACCUMULATION; DIETS; ADIPOSE TISSUE; LIVER; MUSCLES; BRAIN; BIOLOGICAL MONITORING; ENVIRONMENTAL EXPOSURE; BIRDS; WATERFOWL; AQUATIC; TERRESTRIAL; WATER POLLUTION; DDD; DDE; DDT; DIELDRIN; POLYCHLORINATED BIPHENYLS
Niethammer, K.R.; Baskett, T.S.; White, D.H. 1984 Bulletin of Environmental Contamination and Toxicology 33:491-498

Ethane, 1,1-dichloro-2,2-bis(p-chlorphenyl)- (8 CI); Benzene, 1,1'-(2,2-dichloroethylidene)bis(4-chloro- (9 CI)
72-54-8
C14-H10-Cl4
MW 320.05, MP 109-110 C, BP 193 C at 1 mm Hg

Heron, little blue
EGRETTA CAERULEA

Tissue	Cases Exposure Route	Range	Mean	General Information
3940 Body	a) 5 b) 9 c) 4	a) 0.09-0.20 ppm b) Not detected-1.78 ppm c) Not detected-0.13 ppm Wet wt	a) 0.13 ppm b) 0.31 ppm c) 0.06 ppm Wet wt	a) Lake Providence, 3.7% lipids b) Lake Bruin, 6.0% lipids c) Lake St. John, 18.2% lipids Collected 6/15-9/25/80. Tertiary consumer, major foods are small fish and invertebrates. Lakes acting as sumps. Louisiana GC

BODY; ENVIRONMENTAL EXPOSURE; LOUISIANA; CHLORINE ORGANIC COMPOUNDS; INSECTICIDES; BIOMAGNIFICATION; FISHES; AGRICULTURE; PESTICIDE RESIDUES; AQUATIC; TERRESTRIAL; BIRDS; SNAKES; FROGS; CRAYFISH
Niethammer, K.R.; White, D.H.; Baskett, T.S.; Sayre, M.W. 1984 Archives of Contamination and Toxicology 13:63-74

Heron, yellow-crowned night
NYCTICORAX VIOLACEUS

Tissue	Cases Exposure Route	Range	Mean	General Information
3941 Body	13 Ingestion	Not detected-0.18 ppm Wet wt	0.03 ppm Wet wt Geometric mean	Immature, shot in 1980. 2 had detectable levels. Mean lipid 8.6%. Skin, beak, feet, GI tract and wing tips removed before homogenization. Low residues linked to crayfish diet. Louisiana, Lake Providence, Lake Bruin, Lake St. John GC; GC/MS

CHLORINE ORGANIC COMPOUNDS; FISHES; LOUISIANA; PESTICIDE RESIDUES; BIOACCUMULATION; DIETS; ADIPOSE TISSUE; LIVER; MUSCLES; BRAIN; BIOLOGICAL MONITORING; ENVIRONMENTAL EXPOSURE; BIRDS; WATERFOWL; AQUATIC; TERRESTRIAL; WATER POLLUTION; DDD; DDE; DDT; DIELDRIN; POLYCHLORINATED BIPHENYLS
Niethammer, K.R.; Baskett, T.S.; White, D.H. 1984 Bulletin of Environmental Contamination and Toxicology 33:491-498

Tissue	Cases Exposure Route	Range	Mean	General Information
3942 Body	2	Not detected-0.18 ppm Wet wt	0.03 ppm Wet wt	Lake Providence, 11.4% lipids. Collected 6/15-9/25/80. Secondary consumer. Lakes acting as sumps. Louisiana GC

BODY; ENVIRONMENTAL EXPOSURE; LOUISIANA; CHLORINE ORGANIC COMPOUNDS; INSECTICIDES; BIOMAGNIFICATION; FISHES; AGRICULTURE; PESTICIDE RESIDUES; AQUATIC; TERRESTRIAL; BIRDS; SNAKES; FROGS; CRAYFISH
Niethammer, K.R.; White, D.H.; Baskett, T.S.; Sayre, M.W. 1984 Archives of Contamination and Toxicology 13:63-74

Ethane, 1,1-dichloro-2,2-bis(p-chlorphenyl)- (8 CI); Benzene, 1,1'-(2,2-dichloroethylidene)bis(4-chloro- (9 CI)
72-54-8
C14-H10-Cl4
MW 320.05, MP 109-110 C, BP 193 C at 1 mm Hg

Kite, black
MILVUS MIGRANS

Tissue	Cases Exposure Route	Range	Mean	General Information
3943 Eggs	a) 2 b) 5 c) 4 Ingestion	a) Not given b) Not given c) Not given	a) 0.024 ppm b) 0.088 ppm c) 0.022 ppm Wet wt	a) Collected 1981 b) 1982 c) 1983. Spain GLC

EGGS; ENVIRONMENTAL EXPOSURE; SPAIN; ADULTS; METAL POISONING; DDE; DDD; DDT; DIELDRIN; HEXACHLOROCYCLOHEXANE; HEPTACHLOR EPOXIDE; ALDRIN; POLYCHLORINATED BIPHENYLS; MERCURY; LEAD; CADMIUM; COPPER; ZINC; BIOACCUMULATION; BIOCONCENTRATION; HEALTH HAZARDS; PESTICIDE RESIDUES; BIRDS; TERRESTRIAL

Gonzales, M.J.; Hernandes, L.M.; Rico, M.C.; Baluja, G. 1984 Journal of Environmental Health and Science

Kite, red
MILVUS MILVUS

Tissue	Cases Exposure Route	Range	Mean	General Information
3944 Eggs	a) 4 b) 4 c) 2 Ingestion	a) Not given b) Not given c) Not given	a) 0.020 ppm b) 0.025 ppm c) 0.020 ppm Wet wt	a) Collected 1981 b) 1982 c) 1983. Spain GLC

EGGS; ENVIRONMENTAL EXPOSURE; SPAIN; ADULTS; METAL POISONING; DDE; DDD; DDT; DIELDRIN; HEXACHLOROCYCLOHEXANE; HEPTACHLOR EPOXIDE; ALDRIN; POLYCHLORINATED BIPHENYLS; MERCURY; LEAD; CADMIUM; COPPER; ZINC; BIOACCUMULATION; BIOCONCENTRATION; HEALTH HAZARDS; PESTICIDE RESIDUES; BIRDS; TERRESTRIAL

Gonzales, M.J.; Hernandes, L.M.; Rico, M.C.; Baluja, G. 1984 Journal of Environmental Health and Science

Ethane, 1,1-dichloro-2,2-bis(p-chlorphenyl)- (8 CI); Benzene, 1,1'-(2,2-dichloroethylidene)bis(4-chloro- (9 CI)
72-54-8
C14-H10-Cl4
MW 320.05, MP 109-110 C, BP 193 C at 1 mm Hg

Loon, common
GAVIA IMMER

Tissue	Cases Exposure Route	Range	Mean	General Information
3045 Embryos	a) 4 b) 14 c) 34 d) 15 e) 12 f) 19	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given	a) 6.3 ug/g b) 1.7 ug/g c) 2.3 ug/g d) 0.0 ug/g e) 0.17 ug/g f) 0.36 ug/g Wet wt	a) Collected in 1968 from Algonquin b) 1969 from Kinoje Lake c) 1970, Algonquin d) 1972, from Algonquin-Parry Sound e) 1978, Algonquin-Parry Sound f) 1979-1980, Algonquin-Parry Sound Significantly higher, a) than b). c)-f) showed decline in organochlorine contaminants. Eggs in 1969 and 1970 had significantly thinner shells than those collected pre-1947. Canada, Ontario, Kinoje Lake; Algonquin Park; Parry Sound GC

EGGS; BRAIN; ADIPOSE TISSUE; LIVER; MUSCLES; FEATHERS; INTESTINES; EMBRYOS; DDT; DDE; DIELDRIN; HEPTACHLOR EPOXIDE; POLYCHLORINATED BIPHENYLS; HEXACHLOROBENZENE; MERCURY; CHLORINE ORGANIC COMPOUNDS; PESTICIDES; PESTICIDE RESIDUES; BIOINDICATORS; BIOLOGICAL MONITORING; BIOACCUMULATION; LUNGS; GIZZARD; BLOOD; HEART; KIDNEYS

Frank, R.; Lumsden, H.; Barr, J.P.; Braun, H.E. 1983 Archives of Environmental Contamination and Toxicology 12:641-654

Merganser, red-breasted
MERGUS SERRATOR

Tissue	Cases Exposure Route	Range	Mean	General Information
3046 Eggs	a) 49 b) 49	a) Not applicable b) Not applicable	a) 0.13 ppm b) 0.20 ppm Wet wt Geometric means	a) Randomly selected b) Unhatched Collected 1977, pairs from same nests analyzed b) significantly higher ($p < 0.01$) than a). DDT conversion is likely source. Lake Michigan, northwestern islands GLC

EGGS; AQUATIC; BIRDS; WATERFOWL; ENVIRONMENTAL EXPOSURE; GREAT LAKES; BROMINATED HYDROCARBONS; CHLORINATED HYDROCARBONS; BROMINE ORGANIC COMPOUNDS; CHLORINE ORGANIC COMPOUNDS; DDE; DDT; DIELDRIN; HEPTACHLOR EPOXIDE; HEXACHLOROBENZENE; INSECTICIDES; MERCURY; NONACHLOR; OXYCHLORDANE; PESTICIDES; POLYBROMINATED BIPHENYLS; POLYCHLORINATED BIPHENYLS; BIOACCUMULATION

Haseltine, S.D.; Heinz, G.H.; Hensler, G.L.; Reichel, W.L. 1983 Environmental Pollution 32:211-232

Ethane, 1,1-dichloro-2,2-bis(p-chlorphenyl)- (8 CI); Benzene, 1,1'-(2,2-dichloroethylidene)bis(4-chloro- (9 CI)
72-54-8
C14-H10-Cl4
MW 320.05, MP 109-110 C, BP 193 C at 1 mm Hg

Mosquitofish
GAMBUSIA AFFINIS

Tissue	Cases Exposure Route	Range	Mean	General Information
3947 Body	a) 5 b) 4	a) 0.35-0.68 ppm b) Not detected-0.51 ppm Wet wt	a) 0.50 ppm b) 0.16 ppm Wet wt	a) Lake Providence, 2.6% lipids b) Lake Bruin, 2.4% lipids. Collected 6/15-9/25/80. Secondary consumers, major foods are small invertebrates. Lakes acting as sumps. Louisiana GC

BODY; ENVIRONMENTAL EXPOSURE; LOUISIANA; CHLORINE ORGANIC COMPOUNDS; INSECTICIDES; BIOMAGNIFICATION; FISHES; AGRICULTURE; PESTICIDE RESIDUES; AQUATIC; TERRESTRIAL; BIRDS; SNAKES; FROGS; CRAYFISH
Niethammer, K.R.; White, D.H.; Baskett, T.S.; Sayre, M.W. 1984 Archives of Contamination and Toxicology 13:63-74

Oyster, American
CRASSOSTREA VIRGINICA

Tissue	Cases Exposure Route	Range	Mean	General Information
3948 Body	a) 213 b) 138 c) 96 d) 262 e) 379 Ingestion	a) Not detected-0.170 ug/g b) Not detected-0.010 ug/g c) Not detected-0.030 ug/g d) Not detected-0.020 ug/g e) Not detected-0.006 ug/g Wet wt	a) 0.040 ug/g b) 0.004 ug/g c) 0.006 ug/g d) 0.002 ug/g e) 0.001 ug/g Wet wt	a) 1976 b) 1977 c) 1978 d) 1979 e) 1980 Biological monitoring for organochlorine residues in shellfish, 1976-1980. Virtually all values below FDA guidelines or safe levels. DDT metabolites (DDE, DDD) and chlordane decrease after 1976. Maryland, Chesapeake Bay area, tributaries GC-EC

CLAMS; CRABS; SHELLFISH; OYSTERS; MARYLAND; CHESAPEAKE BAY; BIOLOGICAL MONITORING; BIOCONCENTRATION; WATER POLLUTION; FOOD CONTAMINATION; CHLORINE ORGANIC COMPOUNDS; DDD; DDE; POLYCHLORINATED BIPHENYLS; CHLORDANE; DIELDRIN; BHC; AQUATIC; ENVIRONMENTAL EXPOSURE
Eisenberg, M.; Topping, J.J. 1984 Journal of Environmental Science and Health B19(7):673-688

Pike, northern
ESOX LUCIUS

Tissue	Cases Exposure Route	Range	Mean	General Information
3949 Adipose	a) 50 b) 7 Ingestion	a) Not detected-0.100 mg/kg b) Not detected-0.044 mg/kg Wet wt	a) 0.021 mg/kg b) 0.023 mg/kg Wet wt	a) North Saskatchewan River below Edmonton b) McGregor Lake Intestinal fat. Canada, Alberta GC-EC

FISHES; CANADA; PESTICIDE RESIDUES; CHLORINE ORGANIC COMPOUNDS; POLYCHLORINATED BIPHENYLS; BIOLOGICAL MONITORING; AQUATIC; BIOCONCENTRATION; ENVIRONMENTAL EXPOSURE; WATER POLLUTION; POLYCHLORINATED BIPHENYLS; DDE; DDD; DIELDRIN; HEXACHLOROBENZENE; HEXACHLOROCYCLOHEXANE
Chovelon, A.; George, L.; Gulayets, C.; Hoyano, Y.; McGuinness, E.; Moore, J.; Ramamoorthy, S.; Ramamoorthy, S.; Singer, P.; Smiley, K.; Wheatly A. 1984 Chemosphere 13(1)19-32

Ethane, 1,1-dichloro-2,2-bis(p-chlorphenyl)- (8 Cl); Benzene, 1,1'-(2,2-dichloroethylidene)bis(4-chloro- (9 Cl)
72-54-8
C14-H10-Cl4
MW 320.05, MP 109-110 C, BP 193 C at 1 mm Hg

Sauger
STIZOSTEDION CANADENSE

Tissue	Cases Exposure Route	Range	Mean	General Information
3950 Adipose	a) 28 b) 32 c) 27 Ingestion	a) Not detected-0.050 mg/kg b) 0.032-0.096 mg/kg c) Not detected-0.088 mg/kg Wet wt	a) 0.019 mg/kg b) 0.058 mg/kg c) 0.02 mg/kg Wet wt	a) Red Deer River, below city of Red Deer b) South Sask[illegible]hewan River c) Oldman [illegible] Intestinal fat. [illegible]ndane (gamma-BHC), detected in c), widely used pesticide. Canada, Alberta GC-EC

FISHES; CANADA; PESTICIDE RESIDUES; CHLORINE ORGANIC COMPOUNDS; POLYCHLORINATED BIPHENYLS; BIOLOGICAL MONITORING; AQUATIC; BIOCONCENTRATION; ENVIRONMENTAL EXPOSURE; WATER POLLUTION; POLYCHLORINATED BIPHENYLS; DDE; DDD; DIELDRIN; HEXACHLOROBENZENE; HEXACHLOROCYCLOHEXANE
Chovelon, A.; George, L.; Gulayets, C.; Hoyano, Y.; McGuinness, E.; Moore, J.; Ramamoorthy, S.; Ramamoorthy, S.; Singer, P.; Smiley, K.; Wheatly A. 1984 Chemosphere 13(1)19-32

Shad, threadfin
DOROSOMA PETENENSE

Tissue	Cases Exposure Route	Range	Mean	General Information
3951 Body	a) 4 b) 5	a) Not detected-1.48 ppm b) 0.28-1.24 ppm Wet wt	a) 0.32 ppm b) 0.46 ppm Wet wt	a) Lake Providence, 4.4% lipids b) Lake Bruin, 5.0% lipids Collected 6/18-9/25/80. Primary consumers, major foods are green algae and protozoans. Lakes acting as sumps. Louisiana GC

BODY; ENVIRONMENTAL EXPOSURE; LOUISIANA; CHLORINE ORGANIC COMPOUNDS; INSECTICIDES; BIOMAGNIFICATION; FISHES; AGRICULTURE; PESTICIDE RESIDUES; AQUATIC; TERRESTRIAL; BIRDS; SNAKES; FROGS; CRAYFISH
Niethammer, K.R.; White, D.H.; Baskett, T.S.; Sayre, M.W. 1984 Archives of Contamination and Toxicology 13:63-74

Shiner, blacktail
NOTROPIS VENUSTUS

Tissue	Cases Exposure Route	Range	Mean	General Information
3952 Body	a) 5 b) 5	a) 0.58-1.63 ppm b) 0.29-0.47 ppm Wet wt	a) 1.16 ppm b) 0.39 ppm Wet wt	a) Lake Providence, 4.8% lipids b) Lake Bruin, 6.8% lipids. Collected 6/18-9/25/80. Secondary consumers, major foods are small invertebrates. Lakes acting as sumps. Louisiana GC

BODY; ENVIRONMENTAL EXPOSURE; LOUISIANA; CHLORINE ORGANIC COMPOUNDS; INSECTICIDES; BIOMAGNIFICATION; FISHES; AGRICULTURE; PESTICIDE RESIDUES; AQUATIC; TERRESTRIAL; BIRDS; SNAKES; FROGS; CRAYFISH
Niethammer, K.R.; White, D.H.; Baskett, T.S.; Sayre, M.W. 1984 Archives of Contamination and Toxicology 13:63-74

Ethane, 1,1-dichloro-2,2-bis(p-chlorphenyl)- (8 CI); Benzene, 1,1'-(2,2-dichloroethylidene)bis(4-chloro- (9 CI)
72-54-8
C14-H10-Cl4
MW 320.05, MP 109-110 C, BP 193 C at 1 mm Hg

Snake, water
NERODIA sp.

Tissue	Cases Exposure Route	Range	Mean	General Information
3953 Body	a) 9 b) 7 c) 1	a) Not detected-0.72 ppm b) Not detected-1.79 ppm c) Not detected-0.20 ppm Wet wt	a) 0.16 ppm b) 0.15 ppm c) 0.04 ppm Wet wt	a) Lake Providence, 3.7% lipide b) Lake Bruin, 3.7% lipide c) Lake St. John, 6.6% lipide Collected 6/15-9/25/80. Tertiary consumers, major foods are fish and frogs. Lakes acting as sumps. Louisiana GC

BODY; ENVIRONMENTAL EXPOSURE; LOUISIANA; CHLORINE ORGANIC COMPOUNDS; INSECTICIDES; BIOMAGNIFICATION; FISHES; AGRICULTURE; PESTICIDE RESIDUES; AQUATIC; TERRESTRIAL; BIRDS; SNAKES; FROGS; CRAYFISH
Niethammer, K.R.; White, D.H.; Baskett, T.S.; Sayre, M.W. 1984 Archives of Contamination and Toxicology 13:63-74

Tissue	Cases Exposure Route	Range	Mean	General Information
3954 Liver	15	0.01-0.02 ppm	Not given	Thomas Point and Belle Helene sites, collected between 1977 & 79. Residue detected in 2 of 15. Range of means. Louisiana, Mississippi River, near Baton Rouge GC-EC

ADIPOSE TISSUE; LIVER; MUSCLES; BODY; SNAKES; AQUATIC; ENVIRONMENTAL EXPOSURE; LOUISIANA; CHLORINE ORGANIC COMPOUNDS; LINDANE; ALDRIN; DIELDRIN; HEPTACHLOR EPOXIDE; HEXACHLOROBENZENE; DDT; DDE; DDE; POLYCHLORINATED BIPHENYLS; FISHES; AGRICULTURE; BIOMAGNIFICATION; BIOCONCENTRATION; PESTICIDE RESIDUES; WATER POLLUTION
Sabourin, T.D.; Stickle, W.B.; Michot, C.E.; Gerton, D.W.; Mushinsky, H.R. 1984 Bulletin of Environmental Contamination and Toxicology 32:460-468

Sucker, longnose
CATOSTOMUS CATOSTOMUS

Tissue	Cases Exposure Route	Range	Mean	General Information
3955 Adipose	54 ingestion	Not detected-0.338 mg/kg Wet wt	0.087 mg/kg Wet wt	North Saskatchewan River below Edmonton. Intestinal fat. Canada, Alberta GC-EC

FISHES; CANADA; PESTICIDE RESIDUES; CHLORINE ORGANIC COMPOUNDS; POLYCHLORINATED BIPHENYLS; BIOLOGICAL MONITORING; AQUATIC; BIOCONCENTRATION; ENVIRONMENTAL EXPOSURE; WATER POLLUTION; POLYCHLORINATED BIPHENYLS; DDE; DDD; DIELDRIN; HEXACHLOROBENZENE; HEXACHLOROCYCLOHEXANE
Chovelon, A.; George, L.; Gulayets, C.; Hoyano, Y.; McGuinness, E.; Moore, J.; Ramamoorthy, S.; Ramamoorthy, S.; Singer, P.; Smiley, K.; Wheatly A. 1984 Chemosphere 13(1)19-32

Ethane, 1,1-dichloro-2,2-bis(p-chlorphenyl)- (8 CI); Benzene, 1,1'-(2,2-dichloroethylidene)bis(4-chloro- (9 CI)
72-54-8
C14-H10-Cl4
MW 320.05, MP 109-110 C, BP 193 C at 1 mm Hg

Sucker, white
CATOSTOMUS COMMERSONI

Tissue	Cases Exposure Route	Range	Mean	General Information
8966 Adipose	a) 40 b) 16 Ingestion	a) Not detected-1.19 mg/kg b) Not detected-0.052 mg/kg Wet wt	a) 0.060 mg/kg b) 0.013 mg/kg Wet wt	a) North Saskatchewan River below Edmonton b) Beaver River. Intestinal fat. Canada, Alberta GC-EC
FISHES; CANADA; PESTICIDE RESIDUES; CHLORINE ORGANIC COMPOUNDS; POLYCHLORINATED BIPHENYLS; BIOLOGICAL MONITORING; AQUATIC; BIOCONCENTRATION; ENVIRONMENTAL EXPOSURE; WATER POLLUTION; POLYCHLORINATED BIPHENYLS; DDE; DDD; DIELDRIN; HEXACHLOROBENZENE; HEXACHLOROCYCLOHEXANE Chovelon, A.; George, L.; Gulayets, C.; Hoyano, Y.; McGuinness, E.; Moore, J.; Ramamoorthy, S.; Ramamoorthy, S.; Singer, P.; Smiley, K.; Wheatly A. 1984 Chemosphere 13(1)19-32				

Tilapia
TILAPIA sp

Tissue	Cases Exposure Route	Range	Mean	General Information
8987 Muscle	Ingestion	a) 0.10-18.18 ug/L b) 6.06-77.26 ug/L c) 10.18-108.57 ug/L d) 27.27-77.65 ug/L e) 0.2-8.47 ug/L f) 8.82-121.2 ug/L g) 18.84-72.32 ug/L h) 16.09-62.15 ug/L	a) 14.12 ug/L b) 41.60 ug/L c) 48.67 ug/L d) 42.80 ug/L e) 2.48 ug/L f) 30.60 ug/L g) 44.57 ug/L h) 35.74 ug/L	a) Aswan b) Assiut c) Cairo d) El-Mansora e) Faraskour f) Edfina g) El-Mahmodia canal h) Abo El-Gheit canal 80 composite samples, approx 5 fish each. Sites a) near Lake Nassar, e), f) near Mediterranean Sea on the Nile river, g), h) in agricultural areas polluted with pesticides (application, leachates). Egypt, Nile River and canals GC-EC
PESTICIDE RESIDUES; FISHES; MUSCLES; EGYPT; AQUATIC; CHLORINE ORGANIC COMPOUNDS; DDT; DDE; BIOLOGICAL MONITORING; WATER POLLUTION; METABOLITES; LINDANE; INSECTICIDES; ENVIRONMENTAL EXPOSURE; HEXACHLOROCYCLOHEXANE Aly, O.A.; Badawy, M.I. 1984 Bulletin of Environmental Contamination and Toxicology 33:246-252				

Ethane, 1,1-dichloro-2,2-bis(p-chlorphenyl)- (8 CI); Benzene, 1,1'-(2,2-dichloroethylidene)bis(4-chloro- (9 CI)
72-54-8
C14-H10-Cl4
MW 320.05, MP 109-110 C, BP 193 C at 1 mm Hg

Walleye
STIZOSTEDION VITREUM VITREUM

Tissue	Cases Exposure Route	Range	Mean	General Information
3088 Adipose	a) 65 b) 21 c) 17 d) 28 Ingestion	a) 0.012-0.400 mg/kg b) Not detected-0.484 mg/kg c) 0.108-0.340 mg/kg d) Not detected-0.088 mg/kg Wet wt	a) 0.090 mg/kg b) 0.080 mg/kg c) 0.180 mg/kg d) 0.009 mg/kg Wet wt	a) North Saskatchewan River below Edmonton b) Beaver River c) Bow River below Calgary d) St. Mary's River Intestinal fat. Canada, Alberta GC-EC

FISHES; CANADA; PESTICIDE RESIDUES; CHLORINE ORGANIC COMPOUNDS; POLYCHLORINATED BIPHENYLS; BIOLOGICAL MONITORING; AQUATIC; BIOCONCENTRATION; ENVIRONMENTAL EXPOSURE; WATER POLLUTION; POLYCHLORINATED BIPHENYLS; DDE; DDD; DIELDRIN; HEXACHLOROBENZENE; HEXACHLOROCYCLOHEXANE

Chovelon, A.; George, L.; Gulayets, C.; Hoyano, Y.; McGuinness, E.; Moore, J.; Ramamoorthy, S.; Ramamoorthy, S.; Singer, P.; Smiley, K.; Wheatly A. 1984 Chemosphere 13(1)19-32

Whitefish, lake
COREGONUS CLUPEAFORMIS

Tissue	Cases Exposure Route	Range	Mean	General Information
3089 Adipose	a) 14 b) 35 Ingestion	a) Not detected-0.022 mg/kg b) Not detected-0.055 mg/kg Wet wt	a) 0.005 mg/kg b) 0.019 mg/kg Wet wt	a) McGregor Lake b) Bow River below Calgary Intestinal fat. Canada, Alberta GC-EC

FISHES; CANADA; PESTICIDE RESIDUES; CHLORINE ORGANIC COMPOUNDS; POLYCHLORINATED BIPHENYLS; BIOLOGICAL MONITORING; AQUATIC; BIOCONCENTRATION; ENVIRONMENTAL EXPOSURE; WATER POLLUTION; POLYCHLORINATED BIPHENYLS; DDE; DDD; DIELDRIN; HEXACHLOROBENZENE; HEXACHLOROCYCLOHEXANE

Chovelon, A.; George, L.; Gulayets, C.; Hoyano, Y.; McGuinness, E.; Moore, J.; Ramamoorthy, S.; Ramamoorthy, S.; Singer, P.; Smiley, K.; Wheatly A. 1984 Chemosphere 13(1)19-32

Ethane, 1,1,1-trichloro-2-(o-chlorophenyl)-2-(p-chlorophenyl)- (8 CI); Benzene, 1-chloro-2-(2,2,2-trichloro-1-(4-chlorophenyl)ethyl)- (9 CI)
789-02-6
C14-H9-Cl5
MW 354.49, BP 74-74.5 C (cor)

Tilapia
TILAPIA sp

Tissue	Cases Exposure Route	Range	Mean	General Information
3960 Muscle	Ingestion	a) 11.1-50.2 ug/L b) 4.8-36.5 ug/L c) 10.6-18.6 ug/L d) 29.8-63.8 ug/L e) 22.6-62.9 ug/L f) 0.2-27.4 ug/L g) 13.8-141.42 ug/L h) 6.2-82.1 ug/L	a) 29.7 ug/L b) 24.6 ug/L c) 15.6 ug/L d) 43.2 ug/L e) 44.0 ug/L f) 23.0 ug/L g) 93.6 ug/L h) 38.8 ug/L	a) Aswan b) Assiut c) Cairo d) El-Mansora e) Faraskour f) Edfina g) El-Mahmodia canal h) Abo El-Gheit canal 80 composite samples, approx 5 fish each. Sites a) near Lake Nassar, e), f) near Mediterranean Sea on the Nile river, g), h) in agricultural areas polluted with pesticides (application, leachates). Egypt, Nile River and canals GC-EC

PESTICIDE RESIDUES; FISHES; MUSCLES; EGYPT; AQUATIC; CHLORINE ORGANIC COMPOUNDS; DDT; DDE; BIOLOGICAL MONITORING; WATER POLLUTION; METABOLITES; LINDANE; INSECTICIDES; ENVIRONMENTAL EXPOSURE; HEXACHLOROCYCLOHEXANE

Aly, O.A.; Badawy, M.I. 1984 Bulletin of Environmental Contamination and Toxicology 33:246-252

Ethane, 1,1,1-trichloro-2,2-bis(p-chlorophenyl)- (8 CI); Benzene, 1,1'-(2,2,2-trichloroethylidene)bis(4-chloro- (9 CI)
50-29-3
C14-H9-Cl5
MW 354.50, MP 108.5-109 C, BP 260 C, VP 1.5X10(E-7) mm Hg at 20 C

Eagle, booted
HIERAETUS PENNATUS

Tissue	Cases Exposure Route	Range	Mean	General Information
3961 Eggs	a) 1 b) 3 Ingestion	a) Not given b) Not given	a) 0.009 ppm b) 0.056 ppm Wet wt	a) Collected 1981 b) 1983. Spain GLC

EGGS; ENVIRONMENTAL EXPOSURE; SPAIN; ADULTS; METAL POISONING; DDE; DDD; DDT; DIELDRIN; HEXACHLOROCYCLOHEXANE; HEPTACHLOR EPOXIDE; ALDRIN; POLYCHLORINATED BIPHENYLS; MERCURY; LEAD; CADMIUM; COPPER; ZINC; BIOACCUMULATION; BIOCONCENTRATION; HEALTH HAZARDS; PESTICIDE RESIDUES; BIRDS; TERRESTRIAL

Gonzales, M.J.; Hernandes, L.M.; Rico, M.C.; Baluja, G. 1984 Journal of Environmental Health and Science

Ethane, 1,1,1-trichloro-2,2-bis(p-chlorophenyl)- (8 CI); Benzene, 1,1'-(2,2,2-trichloroethylidene)bis(4-chloro- (9 CI)
50-29-3
C14-H9-Cl5
MW 354.50, MP 108.5-109 C, BP 260 C, VP 1.5X10(E-7) mm Hg at 20 C

Eagle, imperial
AQUILA HELIACA

Tissue	Cases Exposure Route	Range	Mean	General Information
3062 Eggs	a) 6 b) 3 c) 3 d) 10 Ingestion	a) Not given b) Not given c) Not given d) Not given	a) 0.356 ppm b) 0.582 ppm c) 0.820 ppm d) 0.012 ppm Wet wt	a) Collected 1980 b) 1981 c) 1982 d) 1983. Spain GLC

EGGS; ENVIRONMENTAL EXPOSURE; SPAIN; ADULTS; METAL POISONING; DDE; DDD; DDT; DIELDRIN; HEXACHLOROCYCLOHEXANE; HEPTACHLOR EPOXIDE; ALDRIN; POLYCHLORINATED BIPHENYLS; MERCURY; LEAD; CADMIUM; COPPER; ZINC; BIOACCUMULATION; BIOCONCENTRATION; HEALTH HAZARDS; PESTICIDE RESIDUES; BIRDS; TERRESTRIAL

Gonzales, M.J.; Hernandez, L.M.; Rico, M.C.; Baluja, G. 1984 Journal of Environmental Health and Science

Heron, black-crowned night
NYCTICORAX NYCTICORAX

Tissue	Cases Exposure Route	Range	Mean	General Information
3063 Eggs	147	0.12-1.9 ppm	0.49 ppm Geometric mean	Collected between May 17 and June 1, 1979. Possible sources: nesting and feeding habitats, or migration routes and wintering grounds in Mexico. Colorado; Wyoming GC; EC

EGGS; BIRDS; ENVIRONMENTAL EXPOSURE; COLORADO; WYOMING; CHLORINE ORGANIC COMPOUNDS; DDD; DDE; DDT; DIELDRIN; HEPTACHLOR EPOXIDE; OXYCHLORDANE; NONACHLOR; HEXACHLOROBENZENE; HEXACHLOROCYCLOHEXANE; POLYCHLORINATED BIPHENYLS; ANIMAL POPULATIONS; BIOLOGICAL MONITORING; PESTICIDE RESIDUES; LAND POLLUTION; WATER POLLUTION; AQUATIC

McEwen, L.C.; Stafford, C.J.; Hensler, G.L 1984 Environmental Toxicology and Chemistry 3:367-376

Hobby
FALCO SUBBUTEO

Tissue	Cases Exposure Route	Range	Mean	General Information
3064 Eggs	a) 3 b) 4 Ingestion	a) Not given b) Not given	a) 0.361 ppm b) 0.234 ppm Wet wt	a) Collected 1982 b) 1983. Spain GLC

EGGS; ENVIRONMENTAL EXPOSURE; SPAIN; ADULTS; METAL POISONING; DDE; DDD; DDT; DIELDRIN; HEXACHLOROCYCLOHEXANE; HEPTACHLOR EPOXIDE; ALDRIN; POLYCHLORINATED BIPHENYLS; MERCURY; LEAD; CADMIUM; COPPER; ZINC; BIOACCUMULATION; BIOCONCENTRATION; HEALTH HAZARDS; PESTICIDE RESIDUES; BIRDS; TERRESTRIAL

Gonzales, M.J.; Hernandez, L.M.; Rico, M.C.; Baluja, G. 1984 Journal of Environmental Health and Science

Ethane, 1,1,1-trichloro-2,2-bis(p-chlorophenyl)- (8 CI); Benzene, 1,1'-(2,2,2-trichloroethylidene)bis(4-chloro- (9 CI)
50-29-3
C14-H9-Cl5
MW 354.50, MP 108.5-109 C, BP 260 C, VP 1.5X10(E-7) mm Hg at 20 C

Kite, black
MILVUS MIGRANS

Tissue	Cases Exposure Route	Range	Mean	General Information
3065 Eggs	a) 2 b) 5 c) 4 Ingestion	a) Not given b) Not given c) Not given	a) 0.570 ppm b) 3.136 ppm c) 0.025 ppm Wet wt	a) Collected 1981 b) 1982 c) 1983. Spain GLC
EGGS; ENVIRONMENTAL EXPOSURE; SPAIN; ADULTS; METAL POISONING; DDE; DDD; DDT; DIELDRIN; HEXACHLOROCYCLOHEXANE; HEPTACHLOR EPOXIDE; ALDRIN; POLYCHLORINATED BIPHENYLS; MERCURY; LEAD; CADMIUM; COPPER; ZINC; BIOACCUMULATION; BIOCONCENTRATION; HEALTH HAZARDS; PESTICIDE RESIDUES; BIRDS; TERRESTRIAL				
Gonzales, M.J.; Hernandez, L.M.; Rico, M.C.; Baluja, G. 1984 Journal of Environmental Health and Science				

Kite, red
MILVUS MILVUS

Tissue	Cases Exposure Route	Range	Mean	General Information
3066 Eggs	a) 4 b) 4 c) 2 Ingestion	a) Not given b) Not given c) Not given	a) 0.283 ppm b) 1.026 ppm c) 0.145 ppm Wet wt	a) Collected 1981 b) 1982 c) 1983. Spain GLC
EGGS; ENVIRONMENTAL EXPOSURE; SPAIN; ADULTS; METAL POISONING; DDE; DDD; DDT; DIELDRIN; HEXACHLOROCYCLOHEXANE; HEPTACHLOR EPOXIDE; ALDRIN; POLYCHLORINATED BIPHENYLS; MERCURY; LEAD; CADMIUM; COPPER; ZINC; BIOACCUMULATION; BIOCONCENTRATION; HEALTH HAZARDS; PESTICIDE RESIDUES; BIRDS; TERRESTRIAL				
Gonzales, M.J.; Hernandez, L.M.; Rico, M.C.; Baluja, G. 1984 Journal of Environmental Health and Science				

Ethane, 1,1,1-trichloro-2,2-bis(p-chlorophenyl)- (8 CI); Benzene, 1,1'-(2,2,2-trichloroethylidene)bis(4-chloro- (9 CI)
50-29-3
C14-H9-Cl5
MW 354.50, MP 108.5-109 C, BP 260 C, VP 1.5X10(E-7) mm Hg at 20 C

Tilapia
TILAPIA sp

Tissue	Cases Exposure Route	Range	Mean	General Information
3067 Muscle	Ingestion	a) 6.07-39.5 ug/L b) 32.4-170.18 ug/L c) 10.53-32.82 ug/L d) 64.85-128.53 ug/L e) 14.07-62.29 ug/L f) 8.82-54.46 ug/L g) 44.46-73.56 ug/L h) 30.32-181.14 ug/L	a) 20.32 ug/L b) 69.58 ug/L c) 15.32 ug/L d) 68.57 ug/L e) 44.90 ug/L f) 33.60 ug/L g) 57.40 ug/L h) 96.80 ug/L	a) Aswan b) Assiut c) Cairo d) El-Mansora e) Paraskour f) Edfina g) El-Mahmodia canal h) Abo El-Gheit canal 80 composite samples, approx 5 fish each. Sites a) near Lake Nassar, e), f) near Mediterranean Sea on the Nile river, g), h) in agricultural areas polluted with pesticides (application, leachates). Egypt, Nile River and canals GC-EC
PESTICIDE RESIDUES; FISHES; MUSCLES; EGYPT; AQUATIC; CHLORINE ORGANIC COMPOUNDS; DDT; DDE; BIOLOGICAL MONITORING; WATER POLLUTION; METABOLITES; LINDANE; INSECTICIDES; ENVIRONMENTAL EXPOSURE; HEXACHLOROCYCLOHEXANE Aly, O.A.; Badawy, M.I. 1984 Bulletin of Environmental Contamination and Toxicology 33:246-252				

Ethane, 1,1,1-trichloro-2,2-bis(p-methoxyphenyl)- (8 CI); Benzene, 1,1'-(2,2,2-trichloroethylidene)bis(4-methoxy- (9 CI)
72-43-5
C16-H15-Cl3-O2
MW 345.65, MP 78-78.2 C (dimorphic crystals) or 86-88 C

Goldeye
HIODON ALOSOIDES

Tissue	Cases Exposure Route	Range	Mean	General Information
3068 Adipose	Ingestion	Not detected-2.10 mg/kg Wet wt	0.16 mg/kg Wet wt	North Saskatchewan River below Edmonton. Intestinal fat. Used to control biting-flies. Canada, Alberta GC-EC
FISHES; CANADA; PESTICIDE RESIDUES; CHLORINE ORGANIC COMPOUNDS; POLYCHLORINATED BIPHENYLS; BIOLOGICAL MONITORING; AQUATIC; BIOCONCENTRATION; ENVIRONMENTAL EXPOSURE; WATER POLLUTION; POLYCHLORINATED BIPHENYLS; DDE; DDD; DIELDRIN; HEXACHLOROBENZENE; HEXACHLOROCYCLOHEXANE Chovelon, A.; George, L.; Gulayets, C.; Hoyano, Y.; McGuinness, E.; Moore, J.; Ramamoorthy, S.; Ramamoorthy, S.; Singer, P.; Smiley, K.; Wheatly A. 1984 Chemosphere 13(1)19-32				

Ethane, 1,1,1-trichloro-2,2-bis(p-methoxyphenyl)- (8 CI); Benzene, 1,1'-(2,2,2-trichloroethylidene)bis(4-methoxy- (9 CI)
72-43-5
C16-H15-Cl3-O2
MW 345.65, MP 78-78.2 C (dimorphic crystals) or 86-88 C

Walleye
STIZOSTEDION VITREUM VITREUM

Tissue	Cases Exposure Route	Range	Mean	General Information
3969 Adipose	Ingestion	Not detected-0.0056 mg/kg Wet wt	0.002 mg/kg Wet wt	Saskatchewan River. Intestinal fat. Used to control biting-flies. Canada, Alberta GC-EC

FISHES; CANADA; PESTICIDE RESIDUES; CHLORINE ORGANIC COMPOUNDS; POLYCHLORINATED BIPHENYLS; BIOLOGICAL MONITORING; AQUATIC; BIOCONCENTRATION; ENVIRONMENTAL EXPOSURE; WATER POLLUTION; POLYCHLORINATED BIPHENYLS; DDE; DDD; DIELDRIN; HEXACHLOROBENZENE; HEXACHLOROCYCLOHEXANE

Chovelon, A.; George, L.; Gulayets, C.; Hoyano, Y.; McGuinness, E.; Moore, J.; Ramamoorthy, S.; Ramamoorthy, S.; Singer, P.; Smiley, K.; Wheatly A. 1984 Chemosphere 13(1)19-32

Ethylene, 1,1-dichloro-2,2-bis(p-chlorophenyl)- (8 CI); Benzene, 1,1'-(dichloroethenylidene)bis(4-chloro- (9 CI)
72-55-9
C14-H8-Cl4
MW 318.02, MP 88.4 C

Auk, little
ALLE ALLE

Tissue	Cases Exposure Route	Range	Mean	General Information
3970 Adipose	7 Ingestion	Not given	2.1+/-0.3 ug/g Wet wt	Shot waterfowl. Diet of small crustaceans, normal nutritional condition. Few juveniles. Relationship between trophic level and amount of chlorinated hydrocarbons. Lowest levels in waterfowl studied. Body wt 170 g. Norway, Svalbard; Spitsbergen GC-EC
3971 Liver	9 Ingestion	Not given	0.067+/-0.028 ug/g Wet wt	Shot waterfowl. Diet of small crustaceans, normal nutritional condition. Few juveniles. Relationship between trophic level and amount of chlorinated hydrocarbons. Lowest levels in waterfowl studied. Body wt 170 g. Norway, Svalbard, Spitsbergen GC-EC

LIVER; ADIPOSE TISSUE; MERCURY; PESTICIDE RESIDUES; DIETS; BIOACCUMULATION; NORWAY; BIOLOGICAL MONITORING; BIOMAGNIFICATION; BIPHENYL COMPOUNDS; AQUATIC; BIRDS; ENVIRONMENTAL EXPOSURE; WATERFOWL; WATER POLLUTION; FOOD CONTAMINATION; AUTOPSIES; DDE; HEXACHLOROBENZENE; CHLORINATED HYDROCARBONS

Norheim, G.; Kjos-Hanssen, B. 1984 Environmental Pollution (Series A) 33:143-152

Ethylene, 1,1-dichloro-2,2-bis(p-chlorophenyl)- (8 CI); Benzene, 1,1'-(dichloroethenylidene)bis(4-chloro- (9 CI)
72-55-9
C14-H8-Cl4
MW 318.02, MP 88.4 C

Bass, largemouth
MICROPTERUS SALMOIDES

Tissue	Cases Exposure Route	Range	Mean	General Information
3972 Body	a) 5 b) 5	a) 8.65-16.6 ppm b) 2.93-5.84 ppm Wet wt	a) 11.83 ppm b) 4.32 ppm Wet wt	a) Lake Providence, 7.3% lipids b) Lake Bruin, 9.2% lipids Collected 6/15-9/25/80. Tertiary consumers, major foods are fish and crayfish. Lakes acting as sumps. Louisiana GC
BODY; ENVIRONMENTAL EXPOSURE; LOUISIANA; CHLORINE ORGANIC COMPOUNDS; INSECTICIDES; BIOMAGNIFICATION; FISHES; AGRICULTURE; PESTICIDE RESIDUES; AQUATIC; TERRESTRIAL; BIRDS; SNAKES; FROGS; CRAYFISH				
Niethammer, K.R.; White, D.H.; Baskett, T.S.; Sayre, M.W. 1984 Archives of Contamination and Toxicology 13:63-74				

Bat, big brown
EPTESICUS FUSCUS

Tissue	Cases Exposure Route	Range	Mean	General Information
3973 Adipose	5	a) 7.3-160 ppm b) 6.2-150 ppm c) 6.6-170 ppm Lipid wt	a) 89.5 ppm b) 83.6 ppm c) 90.9 ppm Lipid wt Geometric mean	a) Brown fat b) Small white fat c) Large white fat Bats collected 11/15/78 (early in hibernation) ppm wet wt means: 25.8, 70.4 82.0 ppm in brown fat, small and large white fat, respectively. Maryland, Washington County, Hancock, Round Top Mountain GLC
ADIPOSE TISSUE; TERRESTRIAL; BATS; MARYLAND; DDE; PESTICIDES; ENVIRONMENTAL EXPOSURE				
Clark, D.R.; Krynitsky, A.J. 1983 Environmental Pollution (Series A-Ecological and Biological) 31:287-299				

Bat, Eastern Pipistrelle
PIPISTRELLUS SUBFLAVUS

Tissue	Cases Exposure Route	Range	Mean	General Information
3974 Adipose	5	a) 5.3-40 ppm b) 2.1-40 ppm c) 2.3-38 ppm Lipid wt	a) 14.2 ppm b) 10.9 ppm c) 11.3 ppm Lipid wt Geometric means	a) Brown fat b) Small white fat c) Large white fat Bats collected 11/15/78 (early in hibernation) ppm wet wt means: 4.6, 9.3, 9.8 ppm in brown fat, small and large white fat, respectively. Maryland. Washington County, Hancock, Round Top Mountain GLC
ADIPOSE TISSUE; TERRESTRIAL; BATS; MARYLAND; DDE; PESTICIDES; ENVIRONMENTAL EXPOSURE				
Clark, D.R.; Krynitsky, A.J. 1983 Environmental Pollution (Series A-Ecological and Biological) 31:287-299				

Ethylene, 1,1-dichloro-2,2-bis(p-chlorophenyl)- (8 CI); Benzene, 1,1'-(dichloroethenylidene)bis(4-chloro- (9 CI)
72-55-9
C14-H8-Cl4
MW 318.03, MP 88.4 C

Bat, little brown
MYOTIS LUCIFUGUS

Tissue	Cases Exposure Route	Range	Mean	General Information
3075 Adipose	4	a) 69-400 ppm b) 68-300 ppm c) 65-370 ppm Lipid wt	a) 151.7 ppm b) 123.8 ppm c) 167.2 ppm Lipid wt Geometric means	a) Brown fat b) Small white fat c) Large white fat Bats collected 11/15/78 (early in hibernation) ppm wet wt means: 48.6, 107.5, 150.2 ppm in brown fat, small and large white fat, respectively. Maryland, Washington County, Hancock, Round Top Mountain GLC
ADIPOSE TISSUE; TERRESTRIAL; BATS; MARYLAND; DDE; PESTICIDES; ENVIRONMENTAL EXPOSURE				
Clark, D.R.; Krynitsky, A.J. 1983 Environmental Pollution (Series A-Ecological and Biological) 31:287-299				

Blackbird, red-winged
AGELAIUS PHOENICEUS

Tissue	Cases Exposure Route	Range	Mean	General Information
3076 Brain	a) 5 b) 5 Ingestion	a) 305-550 ppm b) 55-70 ppm Wet wt	a) Not given b) 61 ppm	a) Dead within 2.4 days b) Sacrificed on day 2.4 Fed 1500 ppm DDE for 2 days. Estimated from figure. Maryland, Eastern GC
BODY; BRAIN; TERRESTRIAL; BIRDS; DELIBERATE EXPOSURE; MARYLAND; COMPARATIVE EVALUATIONS; CHLORINATED HYDROCARBONS; DDE; LIPIDS; BIOACCUMULATION; DIETS				
Stickel, W.H.; Stickel, L.F.; Dyrland, R.A.; Hughes, D.L. 1984 Archives of Environmental Contamination and Toxicology 13:1-6				

Bluegill
LEPOMIS MACROCHIRUS

Tissue	Cases Exposure Route	Range	Mean	General Information
3077 Body	a) 5 b) 5	a) 1.75-3.81 ppm b) 1.20-3.05 ppm Wet wt	2.96 ppm b) 1.85 ppm Wet wt	a) Lake Providence, 3.3% lipids b) Lake Bruin, 2.2% lipids Collected 6/15-9/25/80. Secondary consumers, major foods are fish. Lakes acting as sumps. Louisiana GC
BODY; ENVIRONMENTAL EXPOSURE; LOUISIANA; CHLORINE ORGANIC COMPOUNDS; INSECTICIDES; BIOMAGNIFICATION; FISHES; AGRICULTURE; PESTICIDE RESIDUES; AQUATIC; TERRESTRIAL; BIRDS; SNAKES; FROGS; CRAYFISH				
Niethammer, K.R.; White, D.H.; Baskett, T.S.; Sayre, M.W. 1984 Archives of Contamination and Toxicology 13:63-74				

Ethylene, 1,1-dichloro-2,2-bis(p-chlorophenyl)- (8 CI); Benzene, 1,1'-(dichloroethenylidene)bis(4-chloro- (9 CI)
72-55-9
C14-H8-Cl4
MW 318.02, MP 88.4 C

Brant, American
BRANTA BERNICLA

Tissue	Cases Exposure Route	Range	Mean	General Information
3978 Adipose	1	Not applicable	0.02 ug/g Wet wt	Adult collected 10/79 (dead of trauma). Subcutaneous fat. No significant difference in levels due to age, sex or collection site among 11 total species. New York, Lake Ontario GC-EC
3979 Liver	2	Not applicable	0.05 ug/g Wet wt	Adults collected 1/80 and 10/79, dead of trauma. None detected in Long Island bird. New York, Long Island and Lake Ontario GC-EC

ADIPOSE TISSUE; BRAIN; BREAST; LIVER; MUSCLES; BIRDS; ENVIRONMENTAL EXPOSURE; NEW YORK; ADULTS; JUVENILES; SEX; COMPARATIVE EVALUATIONS; CHLORINATED HYDROCARBONS; CHLORINE ORGANIC COMPOUNDS; DDE; INSECTICIDES; POLYCHLORINATED BIPHENYLS; BIOACCUMULATION; PESTICIDE RESIDUES, WATERFOWL; AQUATIC

Kim, K.S.; Pastel, M.J.; Kim, J.S.; Stone, W.B. 1984 Archives of Environmental Contamination and Toxicology 13:373-381

Bufflehead
BUCEPHALA ALBEOLA

Tissue	Cases Exposure Route	Range	Mean	General Information
3980 Liver	2	Not applicable	0.01 ug/g Wet wt	Adult, juvenile collected 10/79 and 12/79. Detected in 1 bird. New York, Hudson and Niagara Rivers GC-EC
3981 Muscle	3	0.01-0.13 ug/g Wet wt	0.07 ug/g Wet wt	Adult, 2 juveniles collected 10/79 and 12/79. Breast muscle. Detected in 2 birds. New York, Niagara and Hudson Rivers GC-EC

ADIPOSE TISSUE; BRAIN; BREAST; LIVER; MUSCLES; BIRDS; ENVIRONMENTAL EXPOSURE; NEW YORK; ADULTS; JUVENILES; SEX; COMPARATIVE EVALUATIONS; CHLORINATED HYDROCARBONS; CHLORINE ORGANIC COMPOUNDS; DDE; INSECTICIDES; POLYCHLORINATED BIPHENYLS; BIOACCUMULATION; PESTICIDE RESIDUES; WATERFOWL; AQUATIC

Kim, K.S.; Pastel, M.J.; Kim, J.S.; Stone, W.B. 1984 Archives of Environmental Contamination and Toxicology 13:373-381

Ethylene, 1,1-dichloro-2,2-bis(p-chlorophenyl)- (8 CI); Benzene, 1,1'-(dichloroethenylidene)bis(4-chloro- (9 CI)
72-55-9
C14-H8-Cl4
MW 318.02, MP 88.4 C

Bullfrog
RANA CATESBEIANA

Tissue	Cases Exposure Route	Range	Mean	General Information
3982 Body	a) 5 b) 1	a) 0.12-0.84 ppm b) Not detected-0.09 ppm Wet wt	a) 0.25 ppm b) 0.03 ppm Wet wt	a) Lake Providence, 1.7% lipids b) Lake Bruin, 0.4% lipids Collected 6/15-9/25/80. Secondary consumers, major foods are crayfish and insects. Lakes acting as sumps. Louisiana GC

BODY; ENVIRONMENTAL EXPOSURE; LOUISIANA; CHLORINE ORGANIC COMPOUNDS; INSECTICIDES; BIOMAGNIFICATION; FISHES; AGRICULTURE; PESTICIDE RESIDUES; AQUATIC; TERRESTRIAL; BIRDS; SNAKES; FROGS; CRAYFISH
Niethammer, K.R.; White, D.H.; Baskett, T.S.; Sayre, M.W. 1984 Archives of Contamination and Toxicology 13:63-74

Catfish, channel
ICTALURUS PUNETATUS

Tissue	Cases Exposure Route	Range	Mean	General Information
3983 Body	4	6.25-14.2 ppm Wet wt	9.68 ppm Wet wt	Lake Providence, 2.9% lipids. Collected 6/15-9/25/80. Tertiary consumers, major foods are fish and insects. Lakes acting as sumps. Louisiana GC

BODY; ENVIRONMENTAL EXPOSURE; LOUISIANA; CHLORINE ORGANIC COMPOUNDS; INSECTICIDES; BIOMAGNIFICATION; FISHES; AGRICULTURE; PESTICIDE RESIDUES; AQUATIC; TERRESTRIAL; BIRDS; SNAKES; FROGS; CRAYFISH
Niethammer, K.R.; White, D.H.; Baskett, T.S.; Sayre, M.W. 1984 Archives of Contamination and Toxicology 13:63-74

Cattle
BOS sp.

Tissue	Cases Exposure Route	Range	Mean	General Information
3984 Adipose	10 Ingestion	a) Not given b) Not given	a) 2.04+/-0.29 ppm b) 2.06+/-0.22 ppm S.E.	a) Controls b) After 30 d of 3% mineral oil added to diet No significant difference. Addition of mineral oil increased fecal elimination threefold in 30 d.
3985 Milk	10 Ingestion	a) Not given b) Not given	a) 2.38+/-0.22 ppm b) 2.68+/-0.14 ppm S.E.	a) Controls b) 70 d after beginning of 3% mineral oil in diet for 30 d No significant difference. Addition of mineral oil increased fecal elimination threefold in 30 d.

BLOOD; URINE; MILK; ADIPOSE TISSUE; GOATS; CATTLE; TERRESTRIAL; DELIBERATE EXPOSURE; DDE; LIPIDS; ANIMAL FEEDS; FOOD ADDITIVES; FOOD CONTAMINATION; DIETS; BIOACCUMULATION; LACTATION; PESTICIDE RESIDUES; PREGNANCY; RADIONUCLIDES
Rosman, K.; Rosman, T.; Smith, G.S. 1984 Bulletin of Environmental Contamination and Toxicology 32:27-36

Ethylene, 1,1-dichloro-2,2-bis(p-chlorophenyl)- (8 CI); Benzene, 1,1'-(dichloroethenylidene)bis(4-chloro- (9 CI)
72-55-9
C14-H8-Cl4
MW 318.02, MP 88.4 C

Chicken, white leghorn
GALLUS sp.

Tissue	Cases Exposure Route	Range	Mean	General Information
3986 Eggshell gland	Ingestion	a) Not given b) Not given	a) 2.2+/-0.2 ug/g b) 4.9+/-0.9 ug/g Wet wt	A) After 45 d exposure to 40 mg/kg b) After 45 d exposure to 40 mg/kg and 25 d exposure to 100 mg/kg Domestic fowl had higher accumulation than waterfowl under similar exposures. Sweden GC
BLOOD PLASMA; EGGSHELL GLAND; WATERFOWL; CHICKENS; AQUATIC; TERRESTRIAL; DELIBERATE EXPOSURE; SWEDEN; DDE; CALCIUM; BIOACCUMULATION; PESTICIDE RESIDUES				
Lundholm, C.E. 1984 Acta Pharmacologica and Toxicologica 54:400-407				

Clam, Asiatic
CORBICULA MANILENSIS

Tissue	Cases Exposure Route	Range	Mean	General Information
3987 Body, whole	9	9.1-46 ug/kg Dry wt	18 ug/kg Dry wt Median	Trend in concentration increase from inorganic to organic to living material. August 1979-May 1980, sampling dates. Non-point sources. No significant seasonal, temporal or spatial variability reported. Florida, Apalachicola River GC-EC
BODY; ASIATIC CLAM; AQUATIC; ENVIRONMENTAL EXPOSURE; FLORIDA; TRACE ELEMENTS; PESTICIDES; POLYCHLORINATED BIPHENYLS; CHROMIUM; COPPER; LEAD; MANGANESE; MERCURY; ZINC; DDD; ORGANOPHOSPHATES; DDE; DDT; DIELDRIN; HEPTACHLOR EPOXIDE; INSECTICIDES; GEOLOGY				
Elder, J.F.; Mattraw, H.C. 1984 Archives of Environmental Contamination and Toxicology 13:453-469				

Clam, hard-shell
MERCENARIA MERCENARIA

Tissue	Cases Exposure Route	Range	Mean	General Information
3988 Body	a) 213 b) 138 c) 98 d) 262 e) 379 Ingestion	a) Not detected-0.004 ug/g b) 0.002-0.010 ug/g c) Not detected-0.030 ug/g d) Not detected-0.010 ug/g e) Trace-0.009 ug/g Wet wt	a) Not detected b) 0.002 ug/g c) 0.017 ug/g d) 0.003 ug/g e) 0.003 ug/g Wet wt	a) 1976 b) 1977 c) 1978 d) 1979 e) 1980 Data include soft-shell clam, MYA ARENARIA. Biological monitoring for organochlorine residues in shellfish, 1976-1980. Virtually all values below FDA guidelines or safe levels. Sample size small, no yearly periodic variation after 1976. Maryland, Chesapeake Bay area, tributaries GC-EC
CLAMS; CRABS; SHELLFISH; OYSTERS; MARYLAND; CHESAPEAKE BAY; BIOLOGICAL MONITORING; BIOCONCENTRATION; WATER POLLUTION; FOOD CONTAMINATION; CHLORINE ORGANIC COMPOUNDS; DDD; DDE; POLYCHLORINATED BIPHENYLS; CHLORDANE; DIELDRIN; BHC; AQUATIC; ENVIRONMENTAL EXPOSURE				
Eisenberg, M.; Topping, J.J. 1984 Journal of Environmental Science and Health B19(7):673-688				

Ethylene, 1,1-dichloro-2,2-bis(p-chlorophenyl)- (8 CI); Benzene, 1,1'-(dichloroethenylidene)bis(4-chloro- (9 CI)
72-55-9
C14-H8-Cl4
MW 318.02, MP 88.4 C

Clam, soft-shell
MYA ARENARIA

Tissue	Cases Exposure Route	Range	Mean	General Information
3989 Body	a) 26 b) 7 c) 18 d) 115 e) 34 Ingestion	a) Not detected-0.004 ug/g b) 0.002-0.010 ug/g c) Not detected-0.030 ug/g d) Not detected-0.010 ug/g e) Trace-0.009 ug/g Wet wt	a) Not detected b) 0.005 ug/g c) 0.017 ug/g d) 0.003 ug/g e) 0.003 ug/g Wet wt	a) 1976 b) 1977 c) 1978 d) 1979 e) 1980 Data include hard-shell clam, MERCENARIA MERCENARIA. Biological monitoring for organochlorine residues in shellfish 1976-1980, Chesapeake Bay and tributaries. Virtually all values below FDA guidelines or safe levels. Sample site small, no yearly periodic variation. Maryland, Chesapeake Bay area, tributaries GC-EC

CLAMS; CRABS; SHELLFISH; OYSTERS; MARYLAND; CHESAPEAKE BAY; BIOLOGICAL MONITORING; BIOCONCENTRATION; WATER POLLUTION; FOOD CONTAMINATION; CHLORINE ORGANIC COMPOUNDS; DDD; DDE; POLYCHLORINATED BIPHENYLS; CHLORDANE; DIELDRIN; BHC; AQUATIC; ENVIRONMENTAL EXPOSURE
Eisenberg, M.; Topping, J.J. 1984 Journal of Environmental Science and Health B19(7):673-688

Coot, American
FULICA AMERICANA

Tissue	Cases Exposure Route	Range	Mean	General Information
3990 Body	4	2.85-13.6 ppm Wet wt	4.87 ppm Wet wt	Lake Providence, 10.6% lipids. Collected 2/80. Secondary consumers. Lakes acting as sumps. Louisiana GC

BODY; ENVIRONMENTAL EXPOSURE; LOUISIANA; CHLORINE ORGANIC COMPOUNDS; INSECTICIDES; BIOMAGNIFICATION; FISHES; AGRICULTURE; PESTICIDE RESIDUES; AQUATIC; TERRESTRIAL; BIRDS; SNAKES; FROGS; CRAYFISH
Niethammer, K.R.; White, D.H.; Baskett, T.S.; Sayre, M.W. 1984 Archives of Contamination and Toxicology 13:63-74

Cormorant, cape
PHALACROCORAX CAPENSIS

Tissue	Cases Exposure Route	Range	Mean	General Information
3991 Eggs	7	0.004-0.15 ug/g	0.05 ug/g	In all eggs. Levels well below those considered to adversely affect reproduction or shell thickness. Marine species generally less contaminated than estuarine/freshwater feeders. South Africa, Eastern Cape GC/MS

BIRDS; AQUATIC; SOUTH AFRICA; CHLORINATED HYDROCARBONS; CHLORINE ORGANIC COMPOUNDS; DDE; DDT; DIELDRIN; PESTICIDES; INSECTICIDES; POLYCHLORINATED BIPHENYLS; BIOACCUMULATION; BIOINDICATORS; PESTICIDE RESIDUES; WATER POLLUTION; ENVIRONMENTAL EXPOSURE
de Kock, A.C.; Randall, R.M. 1984 Environmental Pollution (Series A) 35:193-201

Ethylene, 1,1-dichloro-2,2-bis(p-chlorophenyl)- (8 CI); Benzene, 1,1'-(dichloroethenylidene)bis(4-chloro- (9 CI)
72-55-9
C14-H8-Cl4
MW 318.02, MP 88.4 C

Cormorant, white-breasted
PHALACROCORAX CARBO

Tissue	Cases Exposure Route	Range	Mean	General Information
3992 Eggs	9	0.02-0.26 ug/g	0.17 ug/g	In all eggs. Levels well below those considered to adversely affect reproduction or shell thickness. Marine species generally less contaminated than estuarine/freshwater feeders. South Africa, Eastern Cape GC/MS

BIRDS; AQUATIC; SOUTH AFRICA; CHLORINATED HYDROCARBONS; CHLORINE ORGANIC COMPOUNDS; DDE; DDT; DIELDRIN; PESTICIDES; INSECTICIDES; POLYCHLORINATED BIPHENYLS; BIOACCUMULATION; BIOINDICATORS; PESTICIDE RESIDUES; WATER POLLUTION; ENVIRONMENTAL EXPOSURE
de Kock, A.C.; Randall, R.M. 1984 Environmental Pollution (Series A) 35:193-201

Cottonmouth
AGKISTRODON PISCIVOROUS

Tissue	Cases Exposure Route	Range	Mean	General Information
3993 Body	a) 10 b) 1 c) 1	a) 7.23-41.3 ppm b) 2.73-23.9 ppm c) Not given Wet wt	a) 11.58 ppm b) 11.24 ppm c) 3.14 ppm Wet wt	a) Lake Providence, 4.3% lipids b) Lake Bruin, 2.5% lipids c) Lake St. John, 2.4% lipids Collected 6/15-9/25/80. Tertiary consumers, major foods are snakes, fish and frogs. Lakes acting as sumps. Louisiana GC

BODY; ENVIRONMENTAL EXPOSURE; LOUISIANA; CHLORINE ORGANIC COMPOUNDS; INSECTICIDES; BIOMAGNIFICATION; FISHES; AGRICULTURE; PESTICIDE RESIDUES; AQUATIC; TERRESTRIAL; BIRDS; SNAKES; FROGS; CRAYFISH
Niethammer, K.R.; White, D.H.; Baskett, T.S.; Sayre, M.W. 1984 Archives of Contamination and Toxicology 13:63-74

Cowbird, brown-headed
MOLOTHRUS ATER

Tissue	Cases Exposure Route	Range	Mean	General Information
3994 Brain	a) 5 b) 5 Ingestion	a) 415-520 ppm b) 135-220 ppm Wet wt	a) Not given b) 177 ppm	a) Dead within 9 days b) Sacrificed on day 9 Fed 1500 ppm DDE for 9 days. Estimated from figure. Maryland, Eastern GC

BODY; BRAIN; TERRESTRIAL; BIRDS; DELIBERATE EXPOSURE; MARYLAND; COMPARATIVE EVALUATIONS; CHLORINATED HYDROCARBONS; DDE; LIPIDS; BIOACCUMULATION; DIETS
Stickel, W.H.; Stickel, L.F.; Dyrland, R.A.; Hughes, D.L. 1984 Archives of Environmental Contamination and Toxicology 13:1-6

Ethylene, 1,1-dichloro-2,2-bis(p-chlorophenyl)- (8 CI); Benzene, 1,1'-(dichloroethenylidene)bis(4-chloro- (9 CI)
72-55-9
C14-H8-Cl4
MW 318.02, MP 88.4 C

Crab, blue
CALLINECTES SAPIDUS

Tissue	Cases Exposure Route	Range	Mean	General Information
3995 Body	a) 3 b) 9 c) 22 Ingestion	a) 0.007-0.010 ug/g b) 0.002-0.020 ug/g c) Not detected-0.007 ug/g Wet wt	a) 0.009 ug/g b) 0.005 ug/g c) 0.003 ug/g Wet wt	a) 1976 b) 1979 c) 1980 Biological monitoring for organochlorine residues in shellfish, 1976-1980. Virtually all values below FDA guidelines or safe levels. Sample size small (none 1978), mostly in 1979-1980, not possible to see yearly trend. Data not available 1977. Maryland, Chesapeake Bay area, tributaries GC-EC
CLAMS; CRABS; SHELLFISH; OYSTERS; MARYLAND; CHESAPEAKE BAY; BIOLOGICAL MONITORING; BIOCONCENTRATION; WATER POLLUTION; FOOD CONTAMINATION; CHLORINE ORGANIC COMPOUNDS; DDD; DDE; POLYCHLORINATED BIPHENYLS; CHLORDANE; DIELDRIN; BHC; AQUATIC; ENVIRONMENTAL EXPOSURE				
Eisenberg, M.; Topping, J.J. 1984 Journal of Environmental Science and Health B19(7):673-688				

Crayfish
ORCONECTES LANCIFER

Tissue	Cases Exposure Route	Range	Mean	General Information
3996 Body	a) 5 b) 2	a) 0.12-0.16 ppm b) Not detected-0.05 ppm Wet wt	a) 0.13 ppm b) 0.03 ppm Wet wt	a) Lake Providence, 1.2% lipids b) Lake Bruin, 0.5% lipids Collected 6/15-9/25/80. Primary consumers, major foods are detritus, algae and invertebrates. Lakes acting as sumps. Louisiana GC
BODY; ENVIRONMENTAL EXPOSURE; LOUISIANA; CHLORINE ORGANIC COMPOUNDS; INSECTICIDES; BIOMAGNIFICATION; FISHES; AGRICULTURE; PESTICIDE RESIDUES; AQUATIC; TERRESTRIAL; BIRDS; SNAKES; FROGS; CRAYFISH				
Niethammer, K.R.; White, D.H.; Baskett, T.S.; Sayre, M.W. 1984 Archives of Contamination and Toxicology 13:63-74				

Dove, mourning
ZENAIDURA MACROURA

Tissue	Cases Exposure Route	Range	Mean	General Information
3997 Adipose	3	<0.0001-4.75 ppm	1.2676 ppm	None in 1 bird (same species). Illinois, Vermilion and Shelby Counties GC-EC
3998 Heart	1	<0.0001-0.107 ppm	0.0179 ppm	None in 5 birds (same species). Illinois, Vermilion and Shelby Counties GC-EC

(next page)

Ethylene, 1,1-dichloro-2,2-bis(p-chlorophenyl)- (8 CI); Benzene, 1,1'-(dichloroethenylidene)bis(4-chloro- (9 CI)
72-55-9
C14-H8-Cl4
MW 318.02, MP 88.4 C

Dove, mourning
ZENAIDURA MACROURA

(continued)

Tissue	Cases Exposure Route	Range	Mean	General Information
3999 Liver	1	<0.0001-0.0211 ppm	0.0031 ppm	None in 6 birds (same species). Illinois, Vermilion and Shelby Counties GC-EC
4000 Muscle	2	<0.0001-0.1061 ppm	0.0138 ppm	None in 6 birds (same species). Illinois, Vermilion and Shelby Counties GC-EC

ADIPOSE TISSUE; BRAIN; MUSCLES; LIVER; HEART; TERRESTRIAL; BIRDS; ENVIRONMENTAL EXPOSURE; ILLINOIS; CHLORINATED HYDROCARBONS; CHLORINE ORGANIC COMPOUNDS; DDE; DIELDRIN; HEPTACHLOR EPOXIDE; INSECTICIDES; PESTICIDES; POLYCHLORINATED BIPHENYLS; BIOACCUMULATION; FOOD CONTAMINATION; PESTICIDE RESIDUES

Edwards, W.R.; Dusan, R.E.; Siemers, R.J. 1983 Bulletin of Environmental Contamination and Toxicology 31:407-414

Duck
ANAS PLATYRHYNCHOS

Tissue	Cases Exposure Route	Range	Mean	General Information
4001 Eggshell gland	Ingestion	Not given	1.3+/-0.1 ug/g Wet wt	After 45 d exposure to 40 mg/kg. Sweden GC

BLOOD PLASMA; EGGSHELL GLAND; WATERFOWL; CHICKENS; AQUATIC; TERRESTRIAL; DELIBERATE EXPOSURE; SWEDEN; DDE; CALCIUM; BIOACCUMULATION; PESTICIDE RESIDUES

Lundholm, C.E. 1984 Acta Pharmacologica and Toxicologica 54:400-407

Duck, black
ANAS RUBRIPES

Tissue	Cases Exposure Route	Range	Mean	General Information
4002 Adipose	8	0.10-1.0 ug/g Wet wt	0.21 ug/g Wet wt	7 adults, 1 juvenile shot 10/79, 11/79 and 1/80. Subcutaneous fat. Detected in 5 birds. No significant difference in levels due to age, sex or collection site among 11 total species. New York, Hudson River and Long Island GC-EC

ADIPOSE TISSUE; BRAIN; BREAST; LIVER; MUSCLES; BIRDS; ENVIRONMENTAL EXPOSURE; NEW YORK; ADULTS; JUVENILES; SEX; COMPARATIVE EVALUATIONS; CHLORINATED HYDROCARBONS; CHLORINE ORGANIC COMPOUNDS; DDE; INSECTICIDES; POLYCHLORINATED BIPHENYLS; BIOACCUMULATION; PESTICIDE RESIDUES; WATERFOWL; AQUATIC

Kim, K.S.; Pastel, M.J.; Kim, J.S.; Stone, W.B. 1984 Archives of Environmental Contamination and Toxicology 13:373-381

Ethylene, 1,1-dichloro-2,2-bis(p-chlorophenyl)- (8 CI); Benzene, 1,1'-(dichloroethenylidene)bis(4-chloro- (9 CI)
72-55-9
C14-H8-Cl4
MW 318.02, MP 88.4 C

Duck, black
ANAS RUBRIPES

Tissue	Cases Exposure Route	Range	Mean	General Information
4003 Blood, whole	6 Ingestion	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given g) Not given	a) 0.26+/-0.02 ppm b) 0.24+/-0.01 ppm c) 0.28+/-0.02 ppm d) 0.28+/-0.02 ppm e) 0.17+/-0.02 ppm f) 0.17+/-0.01 ppm g) 0.26+/-0.01 ppm Wet wt	a) Controls, fresh b) Formalin, fresh c) Formalin, 2 mo d) Formalin, 8 mo e) Frozen, 2 mo f) Frozen, 8 mo g) Formalin-frozen, 8 mo Methods of preservation and times of analysis. Dose was 10 mg/kg in dimethyl sulfoxide. Birds sacrificed 6 hrs after dose. Maryland AAS
BLOOD; DELIBERATE EXPOSURE; ADULTS; METAL POISONING; LEAD POISONING; MEASUREMENT METHODS; MERCURY; CADMIUM; LEAD; DDE; METALS; ACCIDENTAL POISONING; ANIMAL POPULATIONS; BIOACCUMULATION; PESTICIDE RESIDUES; AQUATIC; WATERFOWL Wiemeyer, S.N.; Moore, J.F.; Mulhern, B.M. 1984 Bulletin of Environmental Contamination and Toxicology 33:525-532				

Tissue	Cases Exposure Route	Range	Mean	General Information
4004 Brain	8	Not applicable	0.01 ug/g Wet wt	7 adults, 1 juvenile shot 10/79, 11/79 and 1/80. Detected in only 1 bird. New York, Hudson River and Long Island GC-EC
4005 Liver	3	Not applicable	0.09 ug/g Wet wt	3 adults shot 10/79 and 1/80. Detected in only 1 bird. New York, Hudson River and Long Island GC-EC
4006 Muscle	8	Not applicable	0.005 ug/g Wet wt	7 adults, 1 juvenile shot 10/79, 11/79 and 1/80. Breast muscle. Detected in only 2 birds (0.02 ug/g each). New York, Hudson River and Long Island GC-EC
ADIPOSE TISSUE; BRAIN; BREAST; LIVER; MUSCLES; BIRDS; ENVIRONMENTAL EXPOSURE; NEW YORK; ADULTS; JUVENILES; SEX; COMPARATIVE EVALUATIONS; CHLORINATED HYDROCARBONS; CHLORINE ORGANIC COMPOUNDS; DDE; INSECTICIDES; POLYCHLORINATED BIPHENYLS; BIOACCUMULATION; PESTICIDE RESIDUES; WATERFOWL; AQUATIC Kim, K.S.; Pastel, M.J.; Kim, J.S.; Stone, W.B. 1984 Archives of Environmental Contamination and Toxicology 13:373-381				

Duck, mallard
ANAS PLATYRHYNCHOS

Tissue	Cases Exposure Route	Range	Mean	General Information
4007 Adipose	15	0.01-0.32 ug/g Wet wt	0.09 ug/g Wet wt	12 adults, 3 juveniles shot 10/79. Subcutaneous fat. Detected in 8 birds. No significant difference in levels due to age, sex or collection site among 11 total species. New York, Hudson River area GC-EC

(next page)

Ethylene, 1,1-dichloro-2,2-bis(p-chlorophenyl)- (8 CI); Benzene, 1,1'-(dichloroethenylidene)bis(4-chloro- (9 CI)
72-55-9
C14-H8-Cl4
MW 318.02, MP 88.4 C

Duck, mallard
ANAS PLATYRHYNCHOS

(continued)

Tissue	Cases Exposure Route	Range	Mean	General Information
4008 Liver	12	0.01-0.25 ug/g Wet wt	0.02 ug/g Wet wt	9 adults, 3 juveniles shot 10/79. Detected in 3 birds. New York, Hudson River area GC-EC
4009 Muscle	15	0.01-0.16 ug/g Wet wt	0.02 ug/g Wet wt	12 adults, 3 juveniles shot 10/79. Breast muscle. Detected in 4 birds. New York, Hudson River area 1 GC-EC

ADIPOSE TISSUE; BRAIN; BREAST; LIVER; MUSCLES; BIRDS; ENVIRONMENTAL EXPOSURE; NEW YORK; ADULTS; JUVENILES; SEX; COMPARATIVE EVALUATIONS; CHLORINATED HYDROCARBONS; CHLORINE ORGANIC COMPOUNDS; DDE; INSECTICIDES; POLYCHLORINATED BIPHENYLS; BIOACCUMULATION; PESTICIDE RESIDUES; WATERFOWL; AQUATIC

Kim, K.S.; Pastel, M.J.; Kim, J.S.; Stone, W.B. 1984 Archives of Environmental Contamination and Toxicology 13:373-381

Duck, white Pekin
ANAS PLATYRHYNCHOS DOMESTICUS

Tissue	Cases Exposure Route	Range	Mean	General Information
4010 Adipose	1	Not applicable	0.05 ug/g Wet wt	Adult domestic bird sacrificed 10/79. Subcutaneous fat. No significant difference due to age, sex or collection site among 11 total species. New York, Westchester County GC-EC
4011 Brain	1	Not applicable	0.02 ug/g Wet wt	Adult domestic bird sacrificed 10/79 New York, Westchester County GC-EC
4012 Liver	1	Not applicable	0.04 ug/g Wet wt	Adult domestic bird sacrificed 11/79 New York, Long Island GC-EC
4013 Muscle	1	Not applicable	0.11 ug/g Wet wt	Adult domestic bird sacrificed 10/79. Breast muscle New York, Westchester County GC-EC

ADIPOSE TISSUE; BRAIN; BREAST; LIVER; MUSCLES; BIRDS; ENVIRONMENTAL EXPOSURE; NEW YORK; ADULTS; JUVENILES; SEX; COMPARATIVE EVALUATIONS; CHLORINATED HYDROCARBONS; CHLORINE ORGANIC COMPOUNDS; DDE; INSECTICIDES; POLYCHLORINATED BIPHENYLS; BIOACCUMULATION; PESTICIDE RESIDUES; WATERFOWL; AQUATIC

Kim, K.S.; Pastel, M.J.; Kim, J.S.; Stone, W.B. 1984 Archives of Environmental Contamination and Toxicology 13:373-381

Ethylene, 1,1-dichloro-2,2-bis(p-chlorophenyl)- (8 CI); Benzene, 1,1'-(dichloroethenylidene)bis(4-chloro- (9 CI)
72-55-9
C14-H8-Cl4
MW 318.02, MP 88.4 C

Eagle, bald
HALIAEETUS LEUCOCEPHALUS

Tissue	Cases Exposure Route	Range	Mean	General Information
4014 Eggs	126	a) 0.3-3.9 ppm b) 1.6-6.3 ppm c) 3.8-4.1 ppm d) 4.9-9.1 ppm e) 0.6-14.0 ppm f) 0.7-29.0 ppm g) 4.9-23.0 ppm h) 22.0-31.0 ppm i) 17.0-25.0 ppm j) 4.8-42.0 ppm k) 25.0-51.0 ppm l) 5.3-26.0 ppm m) 7.4-26.0 ppm n) Not applicable o) 2.0-13.0 ppm Fresh wet wt	a) 1.76 ppm b) 3.95 ppm c) 3.95 ppm d) 6.93 ppm e) 4.24 ppm f) 5.51 ppm g) 11.58 ppm h) 26.5 ppm i) 20.30 ppm j) 17.99 ppm k) 35.30 ppm l) 11.23 ppm m) 12.62 ppm n) 4.70 ppm o) 7.05 ppm Fresh wet wt	a) AK, 1975-76, 6 eggs b) OR, 1970, 2 eggs c) CA, 1977, 2 eggs d) AZ, 1977, 3 eggs e) MN, 1972, 1976-79, 16 eggs f) WI, 1976-79, 37 eggs g) MI, 1969, 1974, 1978, 4 eggs h) OH, 1976, 2 eggs i) NY, 1971, 1977-78, 3 eggs j) ME, 1974-79, 19 eggs k) DE, 1977-78, 3 eggs l) MD, 1973, 1977-79, 11 eggs m) VA, 1976-77, 1979, 11 eggs n) LA, 1979, 1 egg o) FL, 1975-77, 1979, 6 eggs In every egg. Highest levels in Chesapeake Bay area. 5 ppm associated with 10% shell thinning, >15 ppm with nearly 100% reproductive failure. Minor trends toward declining residues in some states. United States, 15 states GC-EC; GC-MS; Silica gel chromatography

EGGS; EAGLES; BIRDS; ENVIRONMENTAL EXPOSURE; ALASKA; ARIZONA; CALIFORNIA; DELAWARE; FLORIDA; LOUISIANA; MAINE; MARYLAND; MICHIGAN; MINNESOTA; NEW YORK; OHIO; OREGON; VIRGINIA; WISCONSIN; UNITED STATES; CHLORINATED HYDROCARBONS; CHLORINE ORGANIC COMPOUNDS; DDD; DDE; DDT; DIELDRIN; HEXACHLOROBENZENE; INSECTICIDES; MERCURY; PESTICIDES; POLYCHLORINATED BIPHENYLS; BIOACCUMULATION; PESTICIDE RESIDUES; POPULATION EXPOSURE

Wiemeyer, S.N.; Lamont, T.G.; Bunck, C.M.; Sindelar, C.R.; Gramlich, F.J.; Fraser, J.D.; Byrd, M.A. 1984 Archives of Environmental Contamination and Toxicology 13:529-549

Eagle, booted
HIERAETUS PENNATUS

Tissue	Cases Exposure Route	Range	Mean	General Information
4015 Eggs	a) 1 b) 3 Ingestion	a) Not given b) Not given	a) 3.671 ppm b) 0.732 ppm Wet wt	a) Collected 1981 b) 1983. Spain GLC

EGGS; ENVIRONMENTAL EXPOSURE; SPAIN; ADULTS; METAL POISONING; DDE; DDD; DDT; DIELDRIN; HEXACHLOROCYCLOHEXANE; HEPTACHLOR EPOXIDE; ALDRIN; POLYCHLORINATED BIPHENYLS; MERCURY; LEAD; CADMIUM; COPPER; ZINC; BIOACCUMULATION; BIOCONCENTRATION; HEALTH HAZARDS; PESTICIDE RESIDUES; BIRDS; TERRESTRIAL

Gonzales, M.J.; Hernandez, L.M.; Rico, M.C.; Baluja, G. 1984 Journal of Environmental Health and Science

Ethylene, 1,1-dichloro-2,2-bis(p-chlorophenyl)- (8 CI); Benzene, 1,1'-(dichloroethenylidene)bis(4-chloro- (9 CI)
72-55-9
C14-H8-Cl4
MW 318.02, MP 88.4 C

Eagle, imperial
AQUILA HELIACA

Tissue	Cases Exposure Route	Range	Mean	General Information
4016 Eggs	a) 6 b) 3 c) 3 d) 10 Ingestion	a) Not given b) Not given c) Not given d) Not given	a) 3.842 ppm b) 1.841 ppm c) 4.194 ppm d) 0.984 ppm Wet wt	a) Collected 1980 b) 1981 c) 1982 d) 1983. Spain GLC
EGGS; ENVIRONMENTAL EXPOSURE; SPAIN; ADULTS; METAL POISONING; DDE; DDD; DDT; DIELDRIN; HEXACHLOROCYCLOHEXANE; HEPTACHLOR EPOXIDE; ALDRIN; POLYCHLORINATED BIPHENYLS; MERCURY; LEAD; CADMIUM; COPPER; ZINC; BIOACCUMULATION; BIOCONCENTRATION; HEALTH HAZARDS; PESTICIDE RESIDUES; BIRDS; TERRESTRIAL Gonzalez, M.J.; Hernandez, L.M.; Rico, M.C.; Baluja, G. 1984 Journal of Environmental Health and Science				

Eider
SOMATERIA MOLLISSIMA

Tissue	Cases Exposure Route	Range	Mean	General Information
4017 Adipose	5 Ingestion	Not given	0.68+/-0.14 ug/g Wet wt	Shot waterfowl. Diet of benthonic molluscs, above normal nutritional condition. Few juveniles. Relationship between trophic level and amount of chlorinated hydrocarbons. Lowest levels in waterfowl studied. Average body wt 2100 g. Norway, Svalbard, Spitsbergen GC-EC
4018 Liver	9 Ingestion	Not given	0.011+/-0.014 ug/g Wet wt	Shot waterfowl. Diet of benthonic molluscs, above normal nutritional condition. Few juveniles. Relationship between trophic level and amount of chlorinated hydrocarbons. Lowest levels in waterfowl studied. Average body wt 2100 g. Norway, Svalbard, Spitsbergen GC-EC
LIVER; ADIPOSE TISSUE; MERCURY; PESTICIDE RESIDUES; DIETS; BIOACCUMULATION; NORWAY; BIOLOGICAL MONITORING; BIOMAGNIFICATION; BIPHENYL COMPOUNDS; AQUATIC; BIRDS; ENVIRONMENTAL EXPOSURE; WATERFOWL; WATER POLLUTION; FOOD CONTAMINATION; AUTOPSIES; DDE; HEXACHLOROBENZENE; CHLORINATED HYDROCARBONS Norheim, G.; Kjos-Hanssen, B. 1984 Environmental Pollution (Series A) 33:143-152				

Ethylene, 1,1-dichloro-2,2-bis(p-chlorophenyl)- (8 CI); Benzene, 1,1'-(dichloroethenylidene)bis(4-chloro- (9 CI)
72-55-9
C14-H8-Cl4
MW 318.02, MP 88.4 C

Falcon, peregrine
FALCO PEREGRINUS

Tissue	Cases Exposure Route	Range	Mean	General Information
4019 Eggs	41	a) 330-1630 ppm b) 340-890 ppm c) 170-720 ppm d) 60-210 ppm e) 90-530 ppm Lipid wt	a) 805 ppm b) 593 ppm c) 376 ppm d) 110 ppm e) 255 ppm Lipid wt	a) 6 collected in 1978, analyzed by CA Dept of Fish and Game b) Same 6 analyzed by Bodega Marine Lab (BML) c) 10 collected 1980, BML d) 11 collected 1966, 1967, Ontario Research Foundation (ORF) e) 14 collected 1979, 1980, ORF No significant difference in results from different laboratories or between levels by whole egg versus shell membrane analyses. California; Canada GC-EC
4020 Shell membrane	a) 6 b) 10 c) 11 d) 14	a) 325-800 ppm b) 150-770 ppm c) 60-190 ppm d) 100-490 ppm Lipid wt	a) 536 ppm b) 380 ppm c) 95 ppm d) 242 ppm Lipid wt	a) Collected 1978, analyzed by Canadian Wildlife Serive (CWS) b) 1980, CWS c) 166, 1967, CWS d) 1979, 1980, CWS Results not significantly different than those from whole egg analysis. California; Canada GC-EC

EGGS; TERRESTRIAL; BIRDS; FALCONS; ENVIRONMENTAL EXPOSURE; CALIFORNIA; CANADA; COMPARATIVE EVALUATIONS; MEASUREMENT METHODS; CHLORINE ORGANIC COMPOUNDS; DDE; INDUSTRIAL CHEMICALS; POLYCHLORINATED BIPHENYLS; BIOACCUMULATION; POPULATION EXPOSURE

Peakall, D.B.; Lew, T.S.; Springer, A.M.; Walker, W.; Risebrough, R.W.; Monk, J.G.; Jarman, W.M.; Walton, B.J.; Reynolds, L.M.; Fyfe, R.W.; Kiff, L.F. 1983 Archives of Environmental Contamination and Toxicology 12:523-528

Frog, bronze
RANA CATESBIANA CLAMITANS

Tissue	Cases Exposure Route	Range	Mean	General Information
4021 Body	a) 2 b) 1	a) Not detected-0.07 ppm b) Not detected-0.07 ppm Wet wt	a) 0.05 ppm b) 0.04 ppm Wet wt	a) Lake Providence, 1.1% lipids b) Lake Bruin, 0.6% lipids Collected 6/15-9/25/80. Secondary consumers, major foods are small invertebrates. Lakes acting as sumps. Louisiana GC

BODY; ENVIRONMENTAL EXPOSURE; LOUISIANA; CHLORINE ORGANIC COMPOUNDS; INSECTICIDES; BIOMAGNIFICATION; FISHES; AGRICULTURE; PESTICIDE RESIDUES; AQUATIC; TERRESTRIAL; BIRDS; SNAKES; FROGS; CRAYFISH

Niethammer, K.R.; White, D.H.; Baskett, T.S.; Sayre, M.W. 1984 Archives of Contamination and Toxicology 13:63-74

Ethylene, 1,1-dichloro-2,2-bis(p-chlorophenyl)- (8 CI); Benzene, 1,1'-(dichloroethenylidene)bis(4-chloro- (9 CI)
72-55-9
C14-H8-Cl4
MW 318.02, MP 88.4 C

Frog, southern leopard
RANA SPHENOCEPHALA

Tissue	Cases Exposure Route	Range	Mean	General Information
4022 Body	a) 3 b) 2	a) 0.51-0.86 ppm b) Not detected-0.05 ppm Wet wt	a) 0.64 ppm b) 0.04 ppm Wet wt	a) Lake Providence, 3.3% lipids b) Lake Bruin, 1.1% lipids Collected 6/15-9/25/80. Secondary consumers, major foods are small invertebrates. Lakes acting as sumps. Louisiana GC

BODY; ENVIRONMENTAL EXPOSURE; LOUISIANA; CHLORINE ORGANIC COMPOUNDS; INSECTICIDES; BIOMAGNIFICATION; FISHES; AGRICULTURE; PESTICIDE RESIDUES; AQUATIC; TERRESTRIAL; BIRDS; SNAKES; FROGS; CRAYFISH

Niethammer, K.R.; White, D.H.; Baskett, T.S.; Sayre, M.W. 1984 Archives of Contamination and Toxicology 13:63-74

Fulmar
FULMARUS GLACIALIS

Tissue	Cases Exposure Route	Range	Mean	General Information
4023 Adipose	10 Ingestion	Not given	22+/-9 ug/g Wet wt	Shot waterfowl. Diet of high trophic levels of pelagic animals, normal nutritional condition. Few juveniles. Relationship between trophic level and amount of chlorinated hydrocarbons. Levels intermediate in waterfowl studied. Average body wt 860 g. Norway, Svalbard, Spitsbergen GC-EC
4024 Liver	10 Ingestion	Not given	0.63+/-0.23 ug/g Wet wt	Shot waterfowl. Diet of high trophic levels of pelagic animals, normal nutritional condition. Few juveniles. Relationship between trophic level and amount of chlorinated hydrocarbons. Levels intermediate in waterfowl studied. Average body wt 860 g. Norway, Svalbard, Spitsbergen GC-EC

LIVER; ADIPOSE TISSUE; MERCURY; PESTICIDE RESIDUES; DIETS; BIOACCUMULATION; NORWAY; BIOLOGICAL MONITORING; BIOMAGNIFICATION; BIPHENYL COMPOUNDS; AQUATIC; BIRDS; ENVIRONMENTAL EXPOSURE; WATERFOWL; WATER POLLUTION; FOOD CONTAMINATION; AUTOPSIES; DDE; HEXACHLOROBENZENE; CHLORINATED HYDROCARBONS

Norheim, G.; Kjos-Hanssen, B. 1984 Environmental Pollution (Series A) 33:143-152

Ethylene, 1,1-dichloro-2,2-bis(p-chlorophenyl)- (8 CI); Benzene, 1,1'-(dichloroethenylidene)bis(4-chloro- (9 CI)
72-55-9
C14-H8-Cl4
MW 318.02, MP 88.4 C

Gannet, cape
SULA CAPENSIS

Tissue	Cases Exposure Route	Range	Mean	General Information
4025 Eggs	4	0.03-0.05 ug/g	0.04 ug/g	In all eggs. Levels well below those considered to adversely affect reproduction or shell thickness. Marine species generally less contaminated than estuarine/freshwater feeders. South Africa, Eastern Cape GC/MS
BIRDS; AQUATIC; SOUTH AFRICA; CHLORINATED HYDROCARBONS; CHLORINE ORGANIC COMPOUNDS; DDE; DDT; DIELDRIN; PESTICIDES; INSECTICIDES; POLYCHLORINATED BIPHENYLS; BIOACCUMULATION; BIOINDICATORS; PESTICIDE RESIDUES; WATER POLLUTION; ENVIRONMENTAL EXPOSURE				
de Kock, A.C.; Randall, R.M. 1984 Environmental Pollution (Series A) 35:193-201				

Gar, spotted
LEPISOSTEUS OCULATUS

Tissue	Cases Exposure Route	Range	Mean	General Information
4026 Body	a) 1 b) 5	a) Not given b) 5.96-53.5 ppm Wet wt	a) 27.80 ppm b) 12.79 ppm Wet wt	a) Lake Providence, 11.1% lipids b) Lake Bruin, 2.7% lipids Collected 6/15-9/25/80. Tertiary consumers, major foods are fish. Lakes acting as sumps. Louisiana GC
BODY; ENVIRONMENTAL EXPOSURE; LOUISIANA; CHLORINE ORGANIC COMPOUNDS; INSECTICIDES; BIOMAGNIFICATION; FISHES; AGRICULTURE; PESTICIDE RESIDUES; AQUATIC; TERRESTRIAL; BIRDS; SNAKES; FROGS; CRAYFISH				
Niethammer, K.R.; White, D.H.; Baskett, T.S.; Sayre, M.W. 1984 Archives of Contamination and Toxicology 13:63-74				

Goldeye
HIODON ALOSOIDES

Tissue	Cases Exposure Route	Range	Mean	General Information
4027 Adipose	a) 135 b) 16 c) 29 Ingestion	a) 0.022-3.46 mg/kg b) Not detected-0.076 mg/kg c) 0.021-0.581 mg/kg Wet wt	a) 0.582 mg/kg b) 0.016 mg/kg c) 0.197 mg/kg Wet wt	a) North Saskatchewan River below Edmonton b) Red Deer River below city of Red Deer c) South Saskatchewan River Intestinal fat. Canada, Alberta GC-EC
FISHES; CANADA; PESTICIDE RESIDUES; CHLORINE ORGANIC COMPOUNDS; POLYCHLORINATED BIPHENYLS; BIOLOGICAL MONITORING; AQUATIC; BIOCONCENTRATION; ENVIRONMENTAL EXPOSURE; WATER POLLUTION; POLYCHLORINATED BIPHENYLS; DDE; DDD; DIELDRIN; HEXACHLOROBENZENE; HEXACHLOROCYCLOHEXANE				
Chovelon, A.; George, L.; Gulayets, C.; Hoyano, Y.; McGuinness, E.; Moore, J.; Ramamoorthy, S.; Ramamoorthy, S.; Singer, P.; Smiley, K.; Wheatly A. 1984 Chemosphere 13(1)19-32				

Ethylene, 1,1-dichloro-2,2-bis(p-chlorophenyl)- (8 CI); Benzene, 1,1'-(dichloroethenylidene)bis(4-chloro- (9 CI)
72-55-9
C14-H8-Cl4
MW 318.02, MP 88.4 C

Grackle, common
QUISCALUS QUISCULA

Tissue	Cases Exposure Route	Range	Mean	General Information
4028 Body	39 Ingestion	a) 308-1350 ppm, wet wt b) 411-1180 ppm, wet wt c) 35,300-63,100 ppm, lipid basis d) 3,220-24,800 ppm, lipid basis	a) 657+/-339 ppm, wet wt b) 710+/-301 ppm, wet wt c) 46,000+/-7,850 ppm, lipid basis d) 10,500+/-6,940 ppm, lipid basis	a) 16 dead within 7 d b) 23 sacrificed (2.3, 3.3, 7 d and, after untreated food, 28, 56, 112 d) c) Same as a) d) Same as b) Fed 1500 ppm DDE for 7 d, then untreated food. Maryland, Eastern GC
4029 Brain	39 Ingestion	a) 410-694 ppm b) 50-130 ppm c) 55-140 ppm d) 115-210 ppm e) Not given f) Not given g) Not given Wet wt, est. from figure	a) Not given b) 82 ppm c) 98 ppm d) 162 ppm e) 84 ppm f) 52 ppm g) 66 ppm	a) 16 dead within 7 d b) 4 sacrificed after 2.3 d c) 4 after 3.3 d d) 3 after 7 d e) 4 sacrificed 28 d after beginning untreated food f) Four 56 d after untreated food g) Four 112 d after untreated food Fed 1500 ppm for 7 d, then untreated food. Estimated from figure. Maryland, Eastern GC

BODY; BRAIN; TERRESTRIAL; BIRDS; DELIBERATE EXPOSURE; MARYLAND; COMPARATIVE EVALUATIONS; CHLORINATED HYDROCARBONS; DDE; LIPIDS; BIOACCUMULATION; DIETS

Stickel, W.H.; Stickel, L.F.; Dyrland, R.A.; Hughes, D.L. 1984 Archives of Environmental Contamination and Toxicology 13:1-6

Grebe, eared
PODICEPS CASPICUS

Tissue	Cases Exposure Route	Range	Mean	General Information
4030 Adipose	1	Not applicable	0.002 ug/g Wet wt	Juvenile collected 12/79. Subcutaneous fat. No significant difference in levels due to age, sex or collection site among 11 total species. New York, Niagara River GC-EC
4031 Brain	1	Not applicable	0.38 ug/g Wet wt	Juvenile collected 12/79 New York, Niagara River GC-EC
4032 Muscle	1	Not applicable	0.10 ug/g Wet wt	Juvenile collected 12/79. Breast muscle New York, Niagara River GC-EC

ADIPOSE TISSUE; BRAIN; BREAST; LIVER; MUSCLES; BIRDS; ENVIRONMENTAL EXPOSURE; NEW YORK; ADULTS; JUVENILES; SEX; COMPARATIVE EVALUATIONS; CHLORINATED HYDROCARBONS; CHLORINE ORGANIC COMPOUNDS; DDE; INSECTICIDES; POLYCHLORINATED BIPHENYLS; BIOACCUMULATION; PESTICIDE RESIDUES; WATERFOWL; AQUATIC

Kim, K.S.; Pastel, M.J.; Kim, J.S.; Stone, W.B. 1984 Archives of Environmental Contamination and Toxicology 13:373-381

Ethylene, 1,1-dichloro-2,2-bis(p-chlorophenyl)- (8 CI); Benzene, 1,1'-(dichloroethenylidene)bis(4-chloro- (9 CI)
72-55-9
C14-H8-Cl4
MW 318.02, MP 88.4 C

Guillemot, Brunnich's
URIA LOMVIA

Tissue	Cases Exposure Route	Range	Mean	General Information
4033 Liver	9 Ingestion	Not given	0.16+/-0.08 ug/g Wet wt	Shot waterfowl. Diet of fish, pelagic crustaceans. Lean nutritional condition. Few juveniles. Relationship between trophic level and amount of chlorinated hydrocarbons. Lowest levels in waterfowl studied. Average body wt 860 g. Norway, Svalbard, Spitsbergen Disease found in one specimen GC-EC
LIVER; ADIPOSE TISSUE; MERCURY; PESTICIDE RESIDUES; DIETS; BIOACCUMULATION; NORWAY; BIOLOGICAL MONITORING; BIOMAGNIFICATION; BIPHENYL COMPOUNDS; AQUATIC; BIRDS; ENVIRONMENTAL EXPOSURE; WATERFOWL; WATER POLLUTION; FOOD CONTAMINATION; AUTOPSIES; DDE; HEXACHLOROBENZENE; CHLORINATED HYDROCARBONS				
Norheim, G.; Kjos-Hanssen, B. 1984 Environmental Pollution (Series A) 33:143-152				

Gull, glaucous
LARUS HYPERBOREUS

Tissue	Cases Exposure Route	Range	Mean	General Information
4034 Adipose	6 Ingestion	Not given	36+/-22 ug/g Wet wt	Shot waterfowl. Omnivorous scavengers, above average nutritional condition. Few juveniles. Relationship between trophic level and amount of chlorinated hydrocarbons. Highest levels in waterfowl studied. Average body wt 2000 g. Norway, Svalbard; Spitbergen GC-EC
4035 Liver	11 Ingestion	Not given	1.9+/-1.9 ug/g Wet wt	Shot waterfowl. Omnivorous scavengers, above average nutritional condition. Few juveniles. Relationship between trophic level and amount of chlorinated hydrocarbons. Highest levels in waterfowl studied. Average body wt 2000 g. Norway, Svalbard, Spitsbergen GC-EC
LIVER; ADIPOSE TISSUE; MERCURY; PESTICIDE RESIDUES; DIETS; BIOACCUMULATION; NORWAY; BIOLOGICAL MONITORING; BIOMAGNIFICATION; BIPHENYL COMPOUNDS; AQUATIC; BIRDS; ENVIRONMENTAL EXPOSURE; WATERFOWL; WATER POLLUTION; FOOD CONTAMINATION; AUTOPSIES; DDE; HEXACHLOROBENZENE; CHLORINATED HYDROCARBONS				
Norheim, G.; Kjos-Hanssen, B. 1984 Environmental Pollution (Series A) 33:143-152				

Ethylene, 1,1-dichloro-2,2-bis(p-chlorophenyl)- (8 CI); Benzene, 1,1'-(dichloroethenylidene)bis(4-chloro- (9 CI)
72-55-9
C14-H8-Cl4
MW 318.02, MP 88.4 C

Gull, grey-headed
LARUS CIRROCEPHALUS

Tissue	Cases Exposure Route	Range	Mean	General Information
4036 Eggs	4	0.15-0.92 ug/g	0.45 ug/g	Present in all eggs analyzed, highest in eggs from Swartkops River. Levels well below those considered to adversely affect reproduction or shell thickness. Most contaminated of 8 species tested. South Africa, Eastern Cape GC/MS
BIRDS; AQUATIC; SOUTH AFRICA; CHLORINATED HYDROCARBONS; CHLORINE ORGANIC COMPOUNDS; DDE; DDT; DIELDRIN; PESTICIDES; INSECTICIDES; POLYCHLORINATED BIPHENYLS; BIOACCUMULATION; BIOINDICATORS; PESTICIDE RESIDUES; WATER POLLUTION; ENVIRONMENTAL EXPOSURE de Kock, A.C.; Randall, R.M. 1984 Environmental Pollution (Series A) 35:193-201				

Gull, kelp
LARUS DOMINICANUS

Tissue	Cases Exposure Route	Range	Mean	General Information
4037 Eggs	15	0.06-0.64 ug/g	0.30 ug/g	In all eggs. Levels well below those considered to adversely affect reproduction or shell thickness. Marine species generally less contaminated than estuarine/freshwater feeders. South Africa, Eastern Cape GC/MS
BIRDS; AQUATIC; SOUTH AFRICA; CHLORINATED HYDROCARBONS; CHLORINE ORGANIC COMPOUNDS; DDE; DDT; DIELDRIN; PESTICIDES; INSECTICIDES; POLYCHLORINATED BIPHENYLS; BIOACCUMULATION; BIOINDICATORS; PESTICIDE RESIDUES; WATER POLLUTION; ENVIRONMENTAL EXPOSURE de Kock, A.C.; Randall, R.M. 1984 Environmental Pollution (Series A) 35:193-201				

Heron, black-crowned night
NYCTICORAX NYCTICORAX

Tissue	Cases Exposure Route	Range	Mean	General Information
4038 Eggs	147	0.33-44.0 ppm	3.1 ppm Geometric mean	Collected 5/17-6/1/79. Possible sources: nesting and feeding habitats, or migration routes and wintering grounds in Mexico. Shell thicknesses inversely correlated with levels. Colorado; Wyoming GC; EC
EGGS; BIRDS; ENVIRONMENTAL EXPOSURE; COLORADO; WYOMING; CHLORINE ORGANIC COMPOUNDS; DDD; DDE; DDT; DIELDRIN; HEPTACHLOR EPOXIDE; OXYCHLORDANE; NONACHLOR; HEXACHLOROBENZENE; HEXACHLOROCYCLOHEXANE; POLYCHLORINATED BIPHENYLS; ANIMAL POPULATIONS; BIOLOGICAL MONITORING; PESTICIDE RESIDUES; LAND POLLUTION; WATER POLLUTION; AQUATIC McEwen, L.C.; Stafford, C.J.; Hensler, G.L 1984 Environmental Toxicology and Chemistry 3:367-376				

Ethylene, 1,1-dichloro-2,2-bis(p-chlorophenyl)- (8 Cl); Benzene, 1,1'-(dichloroethenylidene)bis(4-chloro- (9 Cl)
72-55-9
C14-H8-Cl4
MW 318.02, MP 88.4 C
Heron, green-backed
BUTORIDES STRIATUS

Tissue	Cases Exposure Route	Range	Mean	General Information
4039 Adipose	4 Ingestion	Not applicable	183 ppm Wet wt	Composite from birds shot in 1980. Residues linked to fish diet. Louisiana, Lake Providence
4040 Body	a) 12 b) 14 Ingestion	a) 2.08-71.2 ppm b) 0.54-38.7 ppm Wet wt	a) 16.38 ppm b) 7.93 ppm Wet wt Geometric means	a) Adults, mean lipid 16.2% b) Immature, mean lipid 14.8% Collected (shot) in 1980. Beak, feet, wing tips, skin, GI tract removed before homogenization. Residues linked to fish diet. Louisiana, Lake Province, Lake Bruin, Lake St. John GC; GC/MS

CHLORINE ORGANIC COMPOUNDS; FISHES; LOUISIANA; PESTICIDE RESIDUES; BIOACCUMULATION; DIETS; ADIPOSE TISSUE; LIVER; MUSCLES; BRAIN; BIOLOGICAL MONITORING; ENVIRONMENTAL EXPOSURE; BIRDS; WATERFOWL; AQUATIC; TERRESTRIAL; WATER POLLUTION; DDD; DDE; DDT; DIELDRIN; POLYCHLORINATED BIPHENYLS
Niethammer, K.R.; Baskett, T.S.; White, D.H. 1984 Bulletin of Environmental Contamination and Toxicology 33:491-498

Tissue	Cases Exposure Route	Range	Mean	General Information
4041 Body	a) 10 b) 10 c) 6	a) 3.02-38.7 ppm b) 0.54-71.2 ppm c) 2.08-11.3 ppm Wet wt	a) 13.4 ppm b) 13.05 ppm c) 6.16 ppm Wet wt	a) Lake Providence, 11.4% lipids b) Lake Bruin, 12.9% lipids c) Lake St. John, 26..% lipids Collected between 6/15-9/25/80. Tertiary consumers, major foods are fish. Lakes acting as sumps. Immature birds are good monitors of contamination. Louisiana GC

BODY; ENVIRONMENTAL EXPOSURE; LOUISIANA; CHLORINE ORGANIC COMPOUNDS; INSECTICIDES; BIOMAGNIFICATION; FISHES; AGRICULTURE; PESTICIDE RESIDUES; AQUATIC; TERRESTRIAL; BIRDS; SNAKES; FROGS; CRAYFISH
Niethammer, K.R.; White, D.H.; Baskett, T.S.; Sayre, M.W. 1984 Archives of Contamination and Toxicology 13:63-74

Tissue	Cases Exposure Route	Range	Mean	General Information
4042 Brain	4 Ingestion	Not applicable	1.50 ppm Wet wt	Composite from birds shot in 1980. Fish diet linked to high levels in this species. Louisiana, Lake Providence GC; GC/MS
4043 Liver	4 Ingestion	Not applicable	6.13 ppm Wet wt	Composite from birds shot in 1980. Residues linked to fish diet. Louisiana, Lake Providence GC; GC/MS

(next page)

Ethylene, 1,1-dichloro-2,2-bis(p-chlorophenyl)- (8 CI); Benzene, 1,1'-(dichloroethenylidene)bis(4-chloro- (9 CI)
72-55-9
C14-H8-Cl4
MW 318.02, MP 88.4 C

Heron, green-backed
BUTORIDES STRIATUS

(continued)

Tissue	Cases Exposure Route	Range	Mean	General Information
4044 Muscle	4 Ingestion	Not applicable	2.92 ppm Wet wt	Composite from birds shot in 1980. Residues linked to fish diet. Louisiana, Lake Providence GC; GC/MS
CHLORINE ORGANIC COMPOUNDS; FISHES; LOUISIANA; PESTICIDE RESIDUES; BIOACCUMULATION; DIETS; ADIPOSE TISSUE; LIVER; MUSCLES; BRAIN; BIOLOGICAL MONITORING; ENVIRONMENTAL EXPOSURE; BIRDS; WATERFOWL; AQUATIC; TERRESTRIAL; WATER POLLUTION; DDD; DDE; DDT; DIELDRIN; POLYCHLORINATED BIPHENYLS				
Niethammer, K.R.; Baskett, T.S.; White, D.H. 1984 Bulletin of Environmental Contamination and Toxicology 33:491-498				

Heron, little blue
EGRETTA CAERULEA

Tissue	Cases Exposure Route	Range	Mean	General Information
4045 Body	a) 6 b) 15 Ingestion	a) 3.03-27.9 ppm b) 0.97-9.90 ppm Wet wt	a) 9.65 ppm b) 2.49 ppm Wet wt Geometric means	a) Adult, mean lipid 10.8% b) Immature, mean lipid 8.2% Collected (shot) 1980. Beak, feet, skin, wing tips and GI tract removed homogenization. Moderate residues linked to mixed diet of fish, crustaceans, and insects. Louisana, Lake Providence, Lake Bruin, Lake St. John GC; GC/MS
CHLORINE ORGANIC COMPOUNDS; FISHES; LOUISIANA; PESTICIDE RESIDUES; BIOACCUMULATION; DIETS; ADIPOSE TISSUE; LIVER; MUSCLES; BRAIN; BIOLOGICAL MONITORING; ENVIRONMENTAL EXPOSURE; BIRDS; WATERFOWL; AQUATIC; TERRESTRIAL; WATER POLLUTION; DDD; DDE; DDT; DIELDRIN; POLYCHLORINATED BIPHENYLS				
Niethammer, K.R.; Baskett, T.S.; White, D.H. 1984 Bulletin of Environmental Contamination and Toxicology 33:491-498				

Tissue	Cases Exposure Route	Range	Mean	General Information
4046 Body	a) 5 b) 10 c) 6	a) 0.97-4.09 ppm b) 1.01-27.9 ppm c) 1.15-3.65 ppm Wet wt	a) 1.98 ppm b) 7.08 ppm c) 2.05 pm Wet wt	a) Lake Providence, 3.7% lipids b) Lake Bruin, 6.0% lipids c) Lake St. John, 18.2% lipids Collected 6/15-9/25/80. Tertiary consumer, major foods are small fish and invertebrates. Lakes acting as sumps. Louisiana GC
BODY; ENVIRONMENTAL EXPOSURE; LOUISIANA; CHLORINE ORGANIC COMPOUNDS; INSECTICIDES; BIOMAGNIFICATION; FISHES; AGRICULTURE; PESTICIDE RESIDUES; AQUATIC; TERRESTRIAL; BIRDS; SNAKES; FROGS; CRAYFISH				
Niethammer, K.R.; White, D.H.; Baskett, T.S.; Sayre, M.W. 1984 Archives of Contamination and Toxicology 13:63-74				

Ethylene, 1,1-dichloro-2,2-bis(p-chlorophenyl)- (8 CI); Benzene, 1,1'-(dichloroethenylidene)bis(4-chloro- (9 CI)
72-55-9
C14-H8-Cl4
MW 318.02, MP 88.4 C

Heron, yellow-crowned night
NYCTICORAX VIOLACEUS

Tissue	Cases Exposure Route	Range	Mean	General Information
4047 Adipose	3 Ingestion	Not applicable	4.12 ppm Wet wt	Composite from birds shot in 1980. Low residues linked to crayfish diet. Louisiana, Lake Providence GC; GC/MS
4048 Body	a) 4 b) 13 Ingestion	a) 0.98-6.94 ppm b) 0.09-7.94 ppm Wet wt	a) 2.46 ppm b) 1.36 ppm Wet wt Geometric means	a) Adults, mean lipid 18.7% b) Immature mean lipid 8.6% Collected (shot) in 1980. Skin, beak, feet, GI tract and wing tips removed before homogenization. Low residue levels linked to crayfish diet. Louisana, Lake Providence, Lake Bruin, Lake St. John GC; GC/MS

CHLORINE ORGANIC COMPOUNDS; FISHES; LOUISIANA; PESTICIDE RESIDUES; BIOACCUMULATION; DIETS; ADIPOSE TISSUE; LIVER; MUSCLES; BRAIN; BIOLOGICAL MONITORING; ENVIRONMENTAL EXPOSURE; BIRDS; WATERFOWL; AQUATIC; TERRESTRIAL; WATER POLLUTION; DDD; DDE; DDT; DIELDRIN; POLYCHLORINATED BIPHENYLS
Niethammer, K.R.; Baskett, T.S.; White, D.H. 1984 Bulletin of Environmental Contamination and Toxicology 33:401-408

Tissue	Cases Exposure Route	Range	Mean	General Information
4049 Body	a) 13 b) 2 c) 2	a) 0.09-7.94 ppm b) 0.58-2.24 ppm c) 0.48-3.90 ppm Wet wt	a) 1.68 ppm b) 1.14 ppm c) 1.37 ppm Wet wt	a) Lake Providence, 11.4% lipids b) Lake Bruin, 16% lipids c) Lake St. John, 17.4% lipids Collected 6/15-9/25/80. Secondary consumer. Lakes acting as sumps. Louisiana GC

BODY; ENVIRONMENTAL EXPOSURE; LOUISIANA; CHLORINE ORGANIC COMPOUNDS; INSECTICIDES; BIOMAGNIFICATION; FISHES; AGRICULTURE; PESTICIDE RESIDUES; AQUATIC; TERRESTRIAL; BIRDS; SNAKES; FROGS; CRAYFISH
Niethammer, K.R.; White, D.H.; Baskett, T.S.; Sayre, M.W. 1984 Archives of Contamination and Toxicology 13:63-74

Tissue	Cases Exposure Route	Range	Mean	General Information
4050 Brain	3 Ingestion	Not applicable	0.12 ppm Wet wt	Composite from birds shot in 1980. Low residues linked to crayfish diet. Louisiana, Lake Providence GC; GC/MS
4051 Liver	3 Ingestion	Not applicable	0.40 ppm Wet wt	Composite from birds shot in 1980. Low residues linked to crayfish diet. Louisiana, Lake Providence GC; GC/MS

(next page)

Ethylene, 1,1-dichloro-2,2-bis(p-chlorophenyl)- (8 CI); Benzene, 1,1'-(dichloroethenylidene)bis(4-chloro- (9 CI)
72-55-9
C14-H8-Cl4
MW 318.02, MP 88.4 C

Heron, yellow-crowned night
NYCTICORAX VIOLACEUS

(continued)

Tissue	Cases Exposure Route	Range	Mean	General Information
4052 Muscle	3 Ingestion	Not applicable	0.40 ppm Wet wt	Composite from birds shot in 1980. Low residues linked to crayfish diet. Louisiana, Lake Providence GC; GC/MS
CHLORINE ORGANIC COMPOUNDS; FISHES; LOUISIANA; PESTICIDE RESIDUES; BIOACCUMULATION; DIETS; ADIPOSE TISSUE; LIVER; MUSCLES; BRAIN; BIOLOGICAL MONITORING; ENVIRONMENTAL EXPOSURE; BIRDS; WATERFOWL; AQUATIC; TERRESTRIAL; WATER POLLUTION; DDD; DDE; DDT; DIELDRIN; POLYCHLORINATED BIPHENYLS Niethammer, K.R.; Baskett, T.S.; White, D.H. 1984 Bulletin of Environmental Contamination and Toxicology 33:491-498				

Hobby
FALCO SUBBUTEO

Tissue	Cases Exposure Route	Range	Mean	General Information
4053 Eggs	a) 3 b) 4 Ingestion	a) Not given b) Not given	a) 3.212 ppm b) 3.345 ppm Wet wt	a) Collected 1982 b) 1983. Spain GLC
EGGS; ENVIRONMENTAL EXPOSURE; SPAIN; ADULTS; METAL POISONING; DDE; DDD; DDT; DIELDRIN; HEXACHLOROCYCLOHEXANE; HEPTACHLOR EPOXIDE; ALDRIN; POLYCHLORINATED BIPHENYLS; MERCURY; LEAD; CADMIUM; COPPER; ZINC; BIOACCUMULATION; BIOCONCENTRATION; HEALTH HAZARDS; PESTICIDE RESIDUES; BIRDS; TERRESTRIAL Gonzales, M.J.; Hernandez, L.M.; Rico, M.C.; Baluja, G. 1984 Journal of Environmental Health and Science				

Kestrel, American
FALCO SPARVERIUS

Tissue	Cases Exposure Route	Range	Mean	General Information
4054 Adipose	a) 5 b) 6 Ingestion	a) 2.0-4.4 ppm b) 394-585 ppm Wet wt	a) 2.7 ppm b) 480 ppm Wet wt Medians	a) Single dose 50 mg/kg acephate in food b) Single dose 50 mg/kg acephate to birds with background levels of DDE (35 ppm wet wt) Predatory vigilance and attack behavior not altered. California Serum and brain cholinesterase depression GC
4055 Blood	a) 5 b) 6 Ingestion	a) 0.003-0.026 ppm b) 1.00-2.39 ppm Wet wt	a) 0.010 ppm b) 1.48 ppm Wet wt Medians	a) Single dose 50 mg/kg acephate in food b) Single dose 50 mg/kg acephate to birds with background levels of DDE (35 ppm wet wt) Predatory vigilance and attack behavior not altered. California Serum and brain cholinesterase depression GC

(next page)

Ethylene, 1,1-dichloro-2,2-bis(p-chlorophenyl)- (8 CI); Benzene, 1,1'-(dichloroethenylidene)bis(4-chloro- (9 CI)
72-55-9
C14-H8-Cl4
MW 318.02, MP 88.4 C

Kestrel, American
FALCO SPARVERIUS

(continued)

Tissue	Cases Exposure Route	Range	Mean	General Information
4056 Body	a) 5 b) 6 Ingestion	a) 0.06-0.28 ppm b) 29-41 ppm Wet wt	a) 0.23 ppm b) 35 ppm Wet wt Medians	a) Single dose 50 mg/kg acephate in food b) Single dose 50 mg/kg acephate to birds with background levels of DDE (35 ppm wet wt) Predatory vigilance and attack behavior not altered. California Serum and brain cholinesterase depression GC
4057 Brain	a) 5 b) 6 Ingestion	a) 0.01-0.03 ppm b) 2.95-4.25 ppm Wet wt	a) 0.03 ppm b) 4.02 ppm Wet wt Medians	a) Single dose 50 mg/kg acephate in food b) Single dose 50 mg/kg acephate to birds with background levels of DDE (35 ppm wet wt) Predatory vigilance and attack behavior not altered. California Serum and brain cholinesterase depression GC

DELIBERATE EXPOSURE; BIRDS; INSECTICIDES; ORGANOPHOSPHATES; CHLORINE ORGANIC COMPOUNDS; TERRESTRIAL; BLOOD; BODY; ADIPOSE TISSUE; BRAIN; CALIFORNIA

Rudolph, S.G.; Zinkl, J.G.; Anderson, D.W.; Shea, P.J. 1984 Archives of Environmental Contamination and Toxicology 13:367-372

Kite, black
MILVUS MIGRANS

Tissue	Cases Exposure Route	Range	Mean	General Information
4058 Eggs	a) 2 b) 5 c) 4 Ingestion	a) Not given b) Not given c) Not given	a) 0.325 ppm b) 2.736 ppm c) 0.639 ppm Wet wt	a) Collected 1981 b) 1982 c) 1983. Spain GLC

EGGS; ENVIRONMENTAL EXPOSURE; SPAIN; ADULTS; METAL POISONING; DDE; DDD; DDT; DIELDRIN; HEXACHLOROCYCLOHEXANE; HEPTACHLOR EPOXIDE; ALDRIN; POLYCHLORINATED BIPHENYLS; MERCURY; LEAD; CADMIUM; COPPER; ZINC; BIOACCUMULATION; BIOCONCENTRATION; HEALTH HAZARDS; PESTICIDE RESIDUES; BIRDS; TERRESTRIAL

Gonzalez, M.J.; Hernandez, L.M.; Rico, M.C.; Baluja, G. 1984 Journal of Environmental Health and Science

Ethylene, 1,1-dichloro-2,2-bis(p-chlorophenyl)- (8 CI); Benzene, 1,1'-(dichloroethenylidene)bis(4-chloro- (9 CI)
72-55-9
C14-H8-Cl4
MW 318.02, MP 88.4 C

Kite, red
MILVUS MILVUS

Tissue	Cases Exposure Route	Range	Mean	General Information
4059 Eggs	a) 4 b) 4 c) 2 Ingestion	a) Not given b) Not given c) Not given	a) 0.319 ppm b) 0.786 ppm c) 1.050 ppm Wet wt	a) Collected 1981 b) 1982 c) 1983. Spain GLC
EGGS; ENVIRONMENTAL EXPOSURE; SPAIN; ADULTS; METAL POISONING; DDE; DDD; DDT; DIELDRIN; HEXACHLOROCYCLOHEXANE; HEPTACHLOR EPOXIDE; ALDRIN; POLYCHLORINATED BIPHENYLS; MERCURY; LEAD; CADMIUM; COPPER; ZINC; BIOACCUMULATION; BIOCONCENTRATION; HEALTH HAZARDS; PESTICIDE RESIDUES; BIRDS; TERRESTRIAL Gonzalez, M.J.; Hernandez, L.M.; Rico, M.C.; Baluja, G. 1984 Journal of Environmental Health and Science				

Loon, common
GAVIA IMMER

Tissue	Cases Exposure Route	Range	Mean	General Information
4060 Embryos	a) 4 b) 14 c) 34 d) 15 e) 12 f) 19	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given	a) 41.4 ug/g b) 8.6 ug/g c) 33.6 ug/g d) 24.8 ug/g e) 6.60 ug/g f) 3.98 ug/g Wet wt	a) Collected in 1968 from Algonquin b) 1969 from Kinoje Lake c) 1970, Algonquin d) 1972, from Algonquin-Parry Sound e) 1978, Algonquin-Parry Sound f) 1979-1980, Algonquin-Parry Sound Significantly higher, a) than b). c)-f) showed decline in organochlorine contaminants. Eggs in 1969 and 1970 had significantly thinner shells than those collected pre-1947. Canada, Ontario, Kinoje Lake; Algonquin Park; Parry Sound GC
EGGS; BRAIN; ADIPOSE TISSUE; LIVER; MUSCLES; FEATHERS; INTESTINES; EMBRYOS; DDT; DDE; DIELDRIN; HEPTACHLOR EPOXIDE; POLYCHLORINATED BIPHENYLS; HEXACHLOROBENZENE; MERCURY; CHLORINE ORGANIC COMPOUNDS; PESTICIDES; PESTICIDE RESIDUES; BIOINDICATORS; BIOLOGICAL MONITORING; BIOACCUMULATION; LUNGS; GIZZARD; BLOOD; HEART; KIDNEYS Frank, R.; Lumsden, H.; Barr, J.F.; Braun, H.E. 1983 Archives of Environmental Contamination and Toxicology 12:641-654				

Merganser, American
MERGUS MERGANSER

Tissue	Cases Exposure Route	Range	Mean	General Information
4061 Adipose	4	0.18-2.0 ug/g Wet wt	0.89 ug/g Wet wt	Adults collected 12/79. Subcutaneous fat. No significant difference in levels due to age, sex or collection site among 11 other species. New York, Niagara River GC-EC
4062 Brain	6	0.04-0.20 ug/g Wet wt	0.12 ug/g Wet wt	Adults collected 12/79. Detected in 2 birds. New York, Niagara River GC-EC

(next page)

Ethylene, 1,1-dichloro-2,2-bis(p-chlorophenyl)- (8 CI); Benzene, 1,1'-(dichloroethenylidene)bis(4-chloro- (9 CI)
72-55-9
C14-H8-Cl4
MW 318.02, MP 88.4 C

Merganser, American
MERGUS MERGANSER

(continued)

Tissue	Cases Exposure Route	Range	Mean	General Information
4063 Liver	5	0.06-0.77 ug/g Wet wt	0.42 ug/g Wet wt	Adults collected 12/79. Levels significantly higher than in mallard and black ducks. New York, Niagara River GC-EC
4064 Muscle	6	0.08-2.0 ug/g Wet wt	0.93 ug/g Wet wt	Adults collected 12/79. Breast muscle. Detected in 5 birds. New York, Niagara River GC-EC

ADIPOSE TISSUE; BRAIN; BREAST; LIVER; MUSCLES; BIRDS; ENVIRONMENTAL EXPOSURE; NEW YORK; ADULTS; JUVENILES; SEX; COMPARATIVE EVALUATIONS; CHLORINATED HYDROCARBONS; CHLORINE ORGANIC COMPOUNDS; DDE; INSECTICIDES; POLYCHLORINATED BIPHENYLS; BIOACCUMULATION; PESTICIDE RESIDUES; WATERFOWL; AQUATIC

Kim, K.S.; Pastel, M.J.; Kim, J.S.; Stone, W.B. 1984 Archives of Environmental Contamination and Toxicology 13:373-381

Merganser, hooded
LOPHODYTES CACULLATUS

Tissue	Cases Exposure Route	Range	Mean	General Information
4065 Adipose	1	Not applicable	1.1 ug/g Wet wt	Adult collected 12/79. Subcutaneous fat. Mean highest of 3 tissues analysed. No significant difference in levels due to age, sex or collection site among 11 total species. New York, Niagara River GC-EC
4066 Liver	1	Not applicable	0.33 ug/g Wet wt	Adult collected 12/79. Levels significantly higher than in mallard and black ducks. New York, Niagara River GC-EC
4067 Muscle	1	Not applicable	0.40 ug/g Wet wt	Adult collected 12/79. Breast muscle New York, Niagara River GC-EC

ADIPOSE TISSUE; BRAIN; BREAST; LIVER; MUSCLES; BIRDS; ENVIRONMENTAL EXPOSURE; NEW YORK; ADULTS; JUVENILES; SEX; COMPARATIVE EVALUATIONS; CHLORINATED HYDROCARBONS; CHLORINE ORGANIC COMPOUNDS; DDE; INSECTICIDES; POLYCHLORINATED BIPHENYLS; BIOACCUMULATION; PESTICIDE RESIDUES; WATERFOWL; AQUATIC

Kim, K.S.; Pastel, M.J.; Kim, J.S.; Stone, W.B. 1984 Archives of Environmental Contamination and Toxicology 13:373-381

Ethylene, 1,1-dichloro-2,2-bis(p-chlorophenyl)- (8 CI); Benzene, 1,1'-(dichloroethenylidene)bis(4-chloro- (9 CI)
72-55-9
C14-H8-Cl4
MW 318.02, MP 88.4 C

Merganser, red-breasted
MERGUS SERRATOR

Tissue	Cases Exposure Route	Range	Mean	General Information
4068 Eggs	a) 40 b) 40	a) Not applicable b) Not applicable	a) 6.68 ppm b) 6.61 ppm Wet wt Geometric means	a) Randomly selected b) Unhatched Collected 1977, pairs from same nests analyzed. No significant difference. Lake Michigan, northwestern islands GLC
EGGS; AQUATIC; BIRDS; WATERFOWL; ENVIRONMENTAL EXPOSURE; GREAT LAKES; BROMINATED HYDROCARBONS; CHLORINATED HYDROCARBONS; BROMINE ORGANIC COMPOUNDS; CHLORINE ORGANIC COMPOUNDS; DDE; DDT; DIELDRIN; HEPTACHLOR EPOXIDE; HEXACHLOROBENZENE; INSECTICIDES; MERCURY; NONACHLOR; OXYCHLORDANE; PESTICIDES; POLYBROMINATED BIPHENYLS; POLYCHLORINATED BIPHENYLS; BIOACCUMULATION Haseltine, S.D.; Heinz, G.H.; Hensler, G.L.; Reichel, W.L. 1983 Environmental Pollution 32:211-232				

Tissue	Cases Exposure Route	Range	Mean	General Information
4069 Liver	2	0.05-0.13 ug/g Wet wt	0.09 ug/g Wet wt	Adults collected 12/79. Levels significantly higher than in mallard and black ducks. New York, Niagara River GC-EC
ADIPOSE TISSUE; BRAIN; BREAST; LIVER; MUSCLES; BIRDS; ENVIRONMENTAL EXPOSURE; NEW YORK; ADULTS; JUVENILES; SEX: COMPARATIVE EVALUATIONS; CHLORINATED HYDROCARBONS; CHLORINE ORGANIC COMPOUNDS; DDE; INSECTICIDES; POLYCHLORINATED BIPHENYLS; BIOACCUMULATION; PESTICIDE RESIDUES; WATERFOWL; AQUATIC Kim, K.S.; Pastel, M.J.; Kim, J.S.; Stone, W.B. 1984 Archives of Environmental Contamination and Toxicology 13:373-381				

Mosquitofish
GAMBUSIA AFFINIS

Tissue	Cases Exposure Route	Range	Mean	General Information
4070 Body	a) 5 b) 5	a) 1.84-2.32 ppm b) 0.21-2.86 ppm Wet wt	a) 2.07 ppm b) 1.01 ppm Wet wt	a) Lake Providence, 2.6% lipids b) Lake Bruin, 2.4% lipids. Collected 6/15-9/25/80. Secondary consumers, major foods are small invertebrates. Lakes acting as sumps. Louisiana GC
BODY; ENVIRONMENTAL EXPOSURE; LOUISIANA; CHLORINE ORGANIC COMPOUNDS; INSECTICIDES; BIOMAGNIFICATION; FISHES; AGRICULTURE; PESTICIDE RESIDUES; AQUATIC; TERRESTRIAL; BIRDS; SNAKES; FROGS; CRAYFISH Niethammer, K.R.; White, D.H.; Baskett, T.S.; Sayre, M.W. 1984 Archives of Contamination and Toxicology 13:63-74				

Ethylene, 1,1-dichloro-2,2-bis(p-chlorophenyl)- (8 CI); Benzene, 1,1'-(dichloroethenylidene)bis(4-chloro- (9 CI)
72-55-9
C14-H8-Cl4
MW 318.02, MP 88.4 C
Owl, barn
TYTO ALBA

Tissue	Cases Exposure Route	Range	Mean	General Information
4071 Body	a) 2 b) 2 c) 9 d) 6 e) 12 f) 7 g) 6 h) 5 Ingestion	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given g) Not given h) Not given	a) 0.80 +or- 0.0078 ppm b) 0.71 +or- 0.091 ppm c) 112.0 +or- 0.056 ppm d) 78.0 +or- 0.34 ppm e) 1.2 +or- 0.18 ppm f) 1.1 +or- 0.16 ppm g) 102.0 +or- 0.10 ppm h) 79.0 +or- 0.16 ppm Wet Wt Geometric means	a) Controls, male b) Controls, female c) 3 ppm DDE, male d) 3 ppm DDE, female e) 0.5 ppm Dieldrin, male f) 0.5 ppm Dieldrin, female g) 3 ppm DDE + 0.5 ppm Dieldrin, male h) 3 ppm DDE + 0.5 ppm Dieldrin, female Levels in diet for 2 yr. Experienced (age 1.5-6 yr) and inexperienced (age 5-10 mo) breeders from captive colony DDE associated with significant shell thinning, egg breakage, embryo mortality, and reduction of production/pair. Dieldrin associated only with slight shell thinning. GC-EC
4072 Eggs	a) 13 b) 9 c) 8 d) 13 e) 10 f) 13 g) 11 h) 10 Ingestion	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given g) Not given h) Not given	a) 0.25 +or- 0.058 ppm b) 12.0 +or- 0.029 ppm c) 0.29 +or- 0.067 ppm d) 12.0 +or- 0.060 ppm e) 0.40 +or- 0.051 ppm f) 41.0 +or- 0.025 ppm g) 0.36 +or- 0.051 ppm h) 42.0 +or- 0.060 ppm Wet wt Geometric means	a) Controls, shell thickness (ST) 0.278 mm b) 3 ppm DDE, ST 0.223 mm c) 0.5 ppm Dieldrin, ST 0.269 mm d) 3 ppm DDE + 0.5 ppm Dieldrin, ST 0.220 mm e) Controls, ST 0.288 mm f) 3 ppm DDE, ST 0.207 mm g) 0.5 ppm Dieldrin, ST 0.272 mm h) 3 ppm DDE + 0.5 ppm Dieldrin, ST 0.206 mm Levels in diet for 2 yr, a)-d) 1975, d)-h) 1976. 3rd egg of 1st clutch in each yr. Experienced (age 1.5-6 yr) and inexperienced (age 5-10 mo) breeders from captive colony. GC-EC
BIRDS; EGGS; MARYLAND; ADULTS; BODY; DDE; DIELDRIN; BIOACCUMULATION				
Mendenhall, V.M.; Klaas, E.E.; McLane, M.A.R. 1983 Archives of Environmental Contamination and Toxicology 12:235-240				

Ethylene, 1,1-dichloro-2,2-bis(p-chlorophenyl)- (8 CI); Benzene, 1,1'-(dichloroethenylidene)bis(4-chloro- (9 CI)
72-55-9
C14-H8-Cl4
MW 318.02, MP 88.4 C

Oyster, American
CRASSOSTREA VIRGINICA

Tissue	Cases Exposure Route	Range	Mean	General Information
4073 Body	a) 213 b) 138 c) 96 d) 262 e) 379 Ingestion	a) 0.010-0.330 ug/g b) Not detected-0.010 ug/g c) Not detected-0.030 ug/g d) Not detected-0.030 ug/g e) Trace-0.008 ug/g Wet wt	a) 0.070 ug/g b) 0.006 ug/g c) 0.008 ug/g d) 0.003 ug/g e) 0.002 ug/g Wet wt	a) 1976 b) 1977 c) 1978 d) 1979 e) 1980 Biological monitoring for organochlorine residues in shellfish, 1976-1980. Virtually all values below FDA guidelines or safe levels. DDT metabolites (DDE, DDD) and chlordane decrease after 1976. Maryland, Chesapeake Bay area, tributaries GC-EC

CLAMS; CRABS; SHELLFISH; OYSTERS; MARYLAND; CHESAPEAKE BAY; BIOLOGICAL MONITORING; BIOCONCENTRATION; WATER POLLUTION; FOOD CONTAMINATION; CHLORINE ORGANIC COMPOUNDS; DDD; DDE; POLYCHLORINATED BIPHENYLS; CHLORDANE; DIELDRIN; BHC; AQUATIC; ENVIRONMENTAL EXPOSURE
Eisenberg, M.; Topping, J.J. 1984 Journal of Environmental Science and Health B19(7):673-688

Oystercatcher, African black
HAEMATOPUS MOQUINI

Tissue	Cases Exposure Route	Range	Mean	General Information
4074 Eggs	5	0.01-0.09 ug/g	0.03 ug/g	In all eggs. Levels well below those considered to adversely affect reproduction or shell thickness. Marine species generally less contaminated than estuarine/freshwater feeders. South Africa, Eastern Cape GC/MS

BIRDS; AQUATIC; SOUTH AFRICA; CHLORINATED HYDROCARBONS; CHLORINE ORGANIC COMPOUNDS; DDE; DDT; DIELDRIN; PESTICIDES; INSECTICIDES; POLYCHLORINATED BIPHENYLS; BIOACCUMULATION; BIOINDICATORS; PESTICIDE RESIDUES; WATER POLLUTION; ENVIRONMENTAL EXPOSURE
de Kock, A.C.; Randall, R.M. 1984 Environmental Pollution (Series A) 35:193-201

Penguin, jackass
SPHENISCUS DEMERSUS

Tissue	Cases Exposure Route	Range	Mean	General Information
4075 Eggs	21	0.003-0.14 ug/g	0.06 ug/g	In all eggs. Levels well below those considered to adversely affect reproduction or shell thickness. Marine species generally less contaminated than estuarine/freshwater feeders. South Africa, Eastern Cape GC/MS

BIRDS; AQUATIC; SOUTH AFRICA; CHLORINATED HYDROCARBONS; CHLORINE ORGANIC COMPOUNDS; DDE; DDT; DIELDRIN; PESTICIDES; INSECTICIDES; POLYCHLORINATED BIPHENYLS; BIOACCUMULATION; BIOINDICATORS; PESTICIDE RESIDUES; WATER POLLUTION; ENVIRONMENTAL EXPOSURE
de Kock, A.C.; Randall, R.M. 1984 Environmental Pollution (Series A) 35:193-201

Ethylene, 1,1-dichloro-2,2-bis(p-chlorophenyl)- (8 CI); Benzene, 1,1'-(dichloroethenylidene)bis(4-chloro- (9 CI)
72-55-9
C14-H8-Cl4
MW 318.02, MP 88.4 C

Pike, northern
ESOX LUCIUS

Tissue	Cases Exposure Route	Range	Mean	General Information
4076 Adipose	a) 50 b) 28 c) 20 d) 7 Ingestion	a) Not detected-1.34 mg/kg b) Not detected-0.067 mg/kg c) 0.010-0.248 mg/kg d) 0.070-0.342 mg/kg Wet wt	a) 0.249 mg/kg b) 0.025 mg/kg c) 0.071 mg/kg d) 0.156 mg/kg Wet wt	a) North Saskatchewan River below Edmonton b) Battle River c) Lake Wabamun, isolated area d) McGregor Lake Intestinal fat. Canada, Alberta GC-EC

FISHES; CANADA; PESTICIDE RESIDUES; CHLORINE ORGANIC COMPOUNDS; POLYCHLORINATED BIPHENYLS; BIOLOGICAL MONITORING; AQUATIC; BIOCONCENTRATION; ENVIRONMENTAL EXPOSURE; WATER POLLUTION; POLYCHLORINATED BIPHENYLS; DDE; DDD; DIELDRIN; HEXACHLOROBENZENE; HEXACHLOROCYCLOHEXANE

Chovelon, A.; George, L.; Gulayets, C.; Hoyano, Y.; McGuinness, E.; Moore, J.; Ramamoorthy, S.; Ramamoorthy, S.; Singer, P.; Smiley, K.; Wheatly A. 1984 Chemosphere 13(1)19-32

Puffin
FRATERCULA ARCTICA

Tissue	Cases Exposure Route	Range	Mean	General Information
4077 Brain	a) 10 b) 10 c) 10 Ingestion	a) 109-767 ng/g b) 207-1519 ng/g c) 17-154 ng/g Fat wt	a) 325+/-195 ng/g b) 577+/-395 ng/g c) 82+/-52 ng/g Fat wt	a) Adults collected at Hernyken, Rost, 7/82 b) Chicks collected at Hernyken, Rost, 7/82 c) Chicks collected at Hernyken, Rost, 7/82. Norway GC
4078 Eggs	20 Ingestion	4035-8289 ng/g Fat wt	5482+/-1163 ng/g Fat wt	Collected at Hernyken, Rost, during 5/83. Norway GC
4079 Liver	Ingestion	a) 946-14,861 ng/g b) 516-23,529 ng/g c) 656-8085 ng/g d) 83-550 ng/g e) 656-4261 ng/g f) 788-8085 ng/g g) 1625-14,861 ng/g h) 946-12,398 ng/g Fat wt	a) 7077+/-3683 ng/g b) 8904+/-7353 ng/g c) 3254+/-2253 ng/g d) 223+/-140 ng/g e) 2296+/-1273 ng/g f) 3462+/-2664 ng/g g) 6168+/-4188 ng/g h) 7945+/-3175 ng/g Fat wt	a) Adults collected at Hernyken, Rost, 7/82, 19 cases b) Adults collected at Hornoy 7/82, 12 cases c) Rost, 7/82, chicks, 17 cases d) Rost, 7/83, chicks, 10 cases e) Rost, 1982, female chicks, 7 cases f) male chicks, 7 cases g) Rost, 1982, female adults, 8 cases h) Male adults, 11 cases. Norway GC

(next page)

Ethylene, 1,1-dichloro-2,2-bis(p-chlorophenyl)- (8 CI); Benzene, 1,1'-(dichloroethenylidene)bis(4-chloro- (9 CI)
72-55-9
C14-H8-Cl4
MW 318.02, MP 88.4 C

Sauger
STIZOSTEDION CANADENSE

Tissue	Cases Exposure Route	Range	Mean	General Information
4085 Adipose	a) 23 b) 32 c) 27 Ingestion	a) 0.096-0.307 mg/kg b) 0.147-0.318 mg/kg c) 0.097-1.16 mg/kg Wet wt	a) 0.226 mg/kg b) 0.281 mg/kg c) 0.388 mg/kg Wet wt	a) Red Deer River, below city of Red Deer b) South Saskatchewan River c) Oldman River Intestinal fat. Lindane (gamma-BHC), detected in c), widely used pesticide. Canada, Alberta GC-EC

FISHES; CANADA; PESTICIDE RESIDUES; CHLORINE ORGANIC COMPOUNDS; POLYCHLORINATED BIPHENYLS; BIOLOGICAL MONITORING; AQUATIC; BIOCONCENTRATION; ENVIRONMENTAL EXPOSURE; WATER POLLUTION; POLYCHLORINATED BIPHENYLS; DDE; DDD; DIELDRIN; HEXACHLOROBENZENE; HEXACHLOROCYCLOHEXANE

Chovelon, A.; George, L.; Gulayets, C.; Hoyano, Y.; McGuinness, E.; Moore, J.; Ramamoorthy, S.; Ramamoorthy, S.; Singer, P.; Smiley, K.; Wheatly A. 1984 Chemosphere 13(1)19-32

Scaup, greater
AYTHYA MARILA

Tissue	Cases Exposure Route	Range	Mean	General Information
4086 Adipose	4	0.54-1.60 ug/g Wet wt	0.91 ug/g Wet wt	3 adults, 1 juvenile collected 12/79 and 1/80. Subcutaneous fat. Detected in 3 birds. No significant difference in levels due to age, sex or collection site among 11 total species. New York, Long Island and Niagara River GC-EC
4087 Brain	4	Not applicable	0.01 ug/g Wet wt	3 adults, 1 juvenile collected 12/79 and 1/80. Detected in only 1 bird. New York, Long Island and Niagara River GC-EC
4088 Liver	3	0.01-0.07 ug/g Wet wt	0.04 ug/g Wet wt	2 adults, 1 juvenile collected 12/79 New York, Long Island and Niagara River GC-EC
4089 Muscle	4	0.01-0.14 ug/g Wet wt	0.06 ug/g Wet wt	3 adults, 1 juvenile collected 12/79 and 1/80. Breast muscle. New York, Long Island and Niagara River GC-EC

ADIPOSE TISSUE; BRAIN; BREAST; LIVER; MUSCLES; BIRDS; ENVIRONMENTAL EXPOSURE; NEW YORK; ADULTS; JUVENILES; SEX; COMPARATIVE EVALUATIONS; CHLORINATED HYDROCARBONS; CHLORINE ORGANIC COMPOUNDS; DDE; INSECTICIDES; POLYCHLORINATED BIPHENYLS; BIOACCUMULATION; PESTICIDE RESIDUES; WATERFOWL; AQUATIC

Kim, K.S.; Pastel, M.J.; Kim, J.S.; Stone, W.B. 1984 Archives of Environmental Contamination and Toxicology 13:373-381

Ethylene, 1,1-dichloro-2,2-bis(p-chlorophenyl)- (8 CI); Benzene, 1,1'-(dichloroethenylidene)bis(4-chloro- (9 CI)
72-55-9
C14-H8-Cl4
MW 318.02, MP 88.4 C

Puffin
FRATERCULA ARCTICA

(continued)

Tissue	Cases Exposure Route	Range	Mean	General Information
4080 Uropygial gland	19 Ingestion	a) 2160-11,415 ng/g b) 3750-37,358 ng/g c) 2160-5002 ng/g d) 8487-11,415 ng/g Fat wt	a) 6679+/-3644 ng/g b) 16,149+/-11,937 ng/g c) 4464+/-2664 ng/g d) 10,370+/-1335 ng/g Fat wt	a) Collected at Hernyken, Rost, 7/82, 8 cases b) Collected at Hornoy, 7/82, 11 cases c) Females, collected at Hernyken, Rost, in 7/82, 5 cases d) Males, 3 cases. Norway GC

LIVER; BRAIN; UROPYGIAL GLAND; EGGS; WATERFOWL; AQUATIC; ENVIRONMENTAL EXPOSURE; NORWAY; ADULTS; JUVENILES; ALDRIN; DDE; HEXACHLOROBENZENE; POLYCHLORINATED BIPHENYLS; HEXACHLOROCYCLOHEXANE; DIELDRIN; PESTICIDES; BIOACCUMULATION; FOOD CONTAMINATION; WATER POLLUTION; INDUSTRIAL POLLUTION; PESTICIDE RESIDUES

Ingebrigtsen, K.; Skaare, J.U.; Teigen, S.W. 1984 Journal of Toxicology and Environmental Health 14:813-828

Robin
TURDUS MIGRATORIUS

Tissue	Cases Exposure Route	Range	Mean	General Information
4081 Brain	1	<0.0001-0.0258 ppm	0.0043 ppm	None in 5 birds (same species). Illinois, Vermilion and Shelby Counties GC-EC
4082 Heart	5	<0.0001-0.316 ppm	0.0833 ppm	None in 1 bird (same species). Illinois, Vermilion and Shelby Counties GC-EC
4083 Liver	1	<0.0001-0.02080 ppm	0.0046 ppm	None in 4 birds (same species). Illinois, Vermilion and Shelby Counties GC-EC
4084 Muscle	1	<0.0001-0.0102 ppm	0.0017 ppm	None in 5 birds (same species). Illinois, Vermilion and Shelby Counties GC-EC

ADIPOSE TISSUE; BRAIN; MUSCLES; LIVER; HEART; TERRESTRIAL; BIRDS; ENVIRONMENTAL EXPOSURE; ILLINOIS; CHLORINATED HYDROCARBONS; CHLORINE ORGANIC COMPOUNDS; DDE; DIELDRIN; HEPTACHLOR EPOXIDE; INSECTICIDES; PESTICIDES; POLYCHLORINATED BIPHENYLS; BIOACCUMULATION; FOOD CONTAMINATION; PESTICIDE RESIDUES

Edwards, W.R.; Dusan, R.E.; Siemers, R.J. 1983 Bulletin of Environmental Contamination and Toxicology 31:407-414

Ethylene,1,1-dichloro-2,2-bis(p-chlorophenyl)-(8 CI);Benzene,1, 1'-(dichloroethenylidene)bis(4-chloro- (9CI)
72-55-9
C14-H8-Cl4
MW 318.02,MP 88.4 C

Scoter, white-winged
MELANITTA DEGLANDI

Tissue	Cases Exposure Route	Range	Mean	General Information
4090 Adipose	2	Not applicable	0.17 ug/g Wet wt	Adults shot 10/79. Subcutaneous fat. Detected in 1 bird. No significant difference in levels due to age, sex or collection site among 11 total species. New York, Hudson River GC-EC
4091 Liver	2	Not applicable	0.10 ug/g Wet wt	Adults shot 10/79. Detected in 1 bird. New York, Hudson River GC-EC
4092 Muscle	2	0.09-0.14 ug/g Wet wt	0.12 ug/g Wet wt	Adults shot 10/79. Breast muscle New York, Hudson River GC-EC

ADIPOSE TISSUE; BRAIN; BREAST; LIVER; MUSCLES; BIRDS; ENVIRONMENTAL EXPOSURE; NEW YORK; ADULTS; JUVENILES; SEX; COMPARATIVE EVALUATIONS; CHLORINATED HYDROCARBONS; CHLORINE ORGANIC COMPOUNDS; DDE; INSECTICIDES; POLYCHLORINATED BIPHENYLS; BIOACCUMULATION; PESTICIDE RESIDUES; WATERFOWL; AQUATIC

Kim, K.S.; Pastel, M.J.; Kim, J.S.; Stone, W.B. 1984 Archives of Environmental Contamination and Toxicology 13:373-381

Seal, harp
PHOCA GROENLANDICA

Tissue	Cases Exposure Route	Range	Mean	General Information
4093 Adipose	227 Ingestion	a) Not given b) Not given c) Not given d) Not given	a) 2.37+/-3.52 mg/kg b) 1.75+/-1.43 mg/kg c) 2.69+/-4.13 mg/kg d) 2.10+/-1.95 mg/kg	a) Males b) Females c) Males, extractable fat d) Females, extractable fat Values given consisted of 80% DDE, 13% p,p'-DDT, 5% p,p'-TDE, 2% o,p'-DDT. 1976-78 annual hunt. Statistical analyses included age, site, residue, tissue correlations. Blubber greatest accumulator. Males accumulated with age, females up to breeding age, then tranplacental, transmammory residue transfer. Levels from northern and southern sites similar, indicated single migratory stock. Adult males Gulf of St. Lawrence highest levels. Levels appeared to be decreasing, no clinical effects apparent. Highest overall means. Canada; Greenland; Northwest Atlantic; Arctic GC-EC
4094 Blood	a) 12 b) 8 Ingestion	a) Not given b) Not given	a) 0.01+/-0.00 mg/kg b) 0.01+/-0.02 mg/kg	a) Males b) Females Values given consisted of 80% DDE, 13% p,p'-DDT, 5% p,p'-TDE, 2% o,p'-DDT. 1976-78 annual hunt. Statistical analyses included age, site, residue, tissue correlations. Canada; Greenland; Northwest Atlantic; Arctic GC-EC

(next page)

Ethylene,1,1-dichloro-2,2-bis(p-chlorophenyl)-(8 CI);Benzene,1, 1'-(dichloroethenylidene)bis(4-chloro- (9CI)
72-55-9
C14-H8-Cl4
MW 318.02,MP 88.4 C

Seal, harp
PHOCA GROENLANDICA

(continued)

Tissue	Cases Exposure Route	Range	Mean	General Information
4095 Brain	66 Ingestion	a) Not given b) Not given c) Not given d) Not given	a) 0.02+/-0.02 mg/kg b) 0.02+/-0.01 mg/kg c) 0.21+/-0.[illegible]9 mg/kg d) 0.18+/-0.12 mg/kg	a) Males b) Females c) Males, extractable fat d) Females, extractable fat Values given consisted of 80% DDE, 13% p,p'-DDT, 5% p,p'-TDE, 2% o,p'-DDT. 1976-78 annual hunt. Statistical analyses included age, site, residue, tissue correlations. Lowest levels of bioaccumulation of tissues studied. Canada; Greenland; Northwest Atlantic; Arctic GC-EC
4096 Kidney	</-115 Ingestion	a) Not given b) Not given c) Not given d) Not given	a) 0.03+/-0.04 mg/kg b) 0.04+/-0.07 mg/kg c) 2.59+/-3.86 mg/kg d) 1.56+/-1.25 mg/kg	a) Males b) Females c) Males, extractable fat d) Females, extractable fat Values given consisted of 80% DDE, 13% p,p'-DDT, 5% p,p'-TDE, 2% o,p'-DDT. 1976-78 annual hunt. Statistical analyses included age, site, residue, tissue correlations. Canada; Greenland; Northwest Atlantic; Arctic GC-EC
4097 Liver	109 Ingestion	a) Not given b) Not given c) Not given d) Not given	a) 0.06+/-0.10 mg/kg b) 0.03+/-0.04 mg/kg c) 3.65+/-6.50 mg/kg d) 1.62+/-1.70 mg/kg	a) Males b) Females c) Males, extractable fat d) Females, extractable fat Values given consisted of 80% DDE, 13% p,p'-DDT, 5% p,p'-TDE, 2% o,p'-DDT. 1976-78 annual hunt. Statistical analyses included age, site, residue, tissue correlations. Canada; Greenland; Northwest Atlantic; Arctic GC-EC
4098 Muscle	111 Ingestion	a) Not given b) Not given c) Not given d) Not given	a) 0.08+/-0.23 mg/kg b) 0.05+/-0.03 mg/kg c) 3.66+/-5.84 mg/kg d) 2.17+/-1.84 mg/kg	a) Males b) Females c) Males, extractable fat d) Females, extractable fat Values given consisted of 80% DDE, 13% p,p'-DDT, 5% p,p'-TDE, 2% o,p'-DDT. 1976-78 annual hunt. Statistical analyses included age, site, residue, tissue correlations. Canada; Greenland; Northwest Atlantic; Arctic GC-EC

SEALS; CHLORINE ORGANIC COMPOUNDS; ADIPOSE TISSUE; BLOOD; BRAIN; LIVER; KIDNEYS; MUSCLES; DDT; DIELDRIN; HEXACHLOROBENZENE; HEPTACHLOR EPOXIDE; ATLANTIC; ARCTIC; CANADA; BIOACCUMULATION; PESTICIDE RESIDUES; BIOLOGICAL MONITORING; AGE; GREENLAND; POLYCHLORINATED BIPHENYLS; SEX; METABOLITES; DDE; ENVIRONMENTAL EXPOSURE; WATER POLLUTION

Ronald, K.; Frank, R.J.; Dougan, J.L.; Frank, R.; Braun, H.E. 1984 Science of the Total Environment 38:133-152

Ethylene,1,1-dichloro-2,2-bis(p-chlorophenyl)-(8 CI);Benzene,1, 1'-(dichloroethenylidene)bis(4-chloro- (9CI)
72-55-9
C14-H8-Cl4
MW 318.02,MP 88.4 C

Shad, threadfin
DOROSOMA PETENENSE

Tissue	Cases Exposure Route	Range	Mean	General Information
4099 Body	a) 5 b) 5	a) 0.05-1.60 ppm b) 0.75-1.75 ppm Wet wt	a) 3.73 ppm b) 1.12 ppm Wet wt	a) Lake Providence, 4.4% lipids b) Lake Bruin, 5.0% lipids Collected 6/15-9/25/80. Primary consumers, major foods are green algae and protozoans. Lakes acting as sumps. Louisiana GC
BODY; ENVIRONMENTAL EXPOSURE; LOUISIANA; CHLORINE ORGANIC COMPOUNDS; INSECTICIDES; BIOMAGNIFICATION; FISHES; AGRICULTURE; PESTICIDE RESIDUES; AQUATIC; TERRESTRIAL; BIRDS; SNAKES; FROGS; CRAYFISH Niethammer, K.R.; White, D.H.; Baskett, T.S.; Sayre, M.W. 1984 Archives of Contamination and Toxicology 13:63-74				

Shiner, blacktail
NOTROPIS VENUSTUS

Tissue	Cases Exposure Route	Range	Mean	General Information
4100 Body	a) 5 b) 5	a) 2.93-10.7 ppm b) 1.59-4.05 ppm Wet wt	a) 4.36 ppm b) 2.59 ppm Wet wt	a) Lake Providence, 4.8% lipids b) Lake Bruin, 6.8% lipids. Collected 6/15-9/25/80. Secondary consumers, major foods are small invertebrates. Lakes acting as sumps. Louisiana GC
BODY; ENVIRONMENTAL EXPOSURE; LOUISIANA; CHLORINE ORGANIC COMPOUNDS; INSECTICIDES; BIOMAGNIFICATION; FISHES; AGRICULTUPE; PESTICIDE RESIDUES; AQUATIC; TERRESTRIAL; BIRDS; SNAKES; FROGS; CRAYFISH Niethammer, K.R.; White, D.H.; Baskett, T.S.; Sayre, M.W. 1984 Archives of Contamination and Toxicology 13:63-74				

Ethylene, 1,1-dichloro-2,2-bis(p-chlorophenyl)- (8 CI); Benzene, 1,1'-(dichloroethenylidene)bis(4-chloro- (9 CI)
72-55-9
C14-H8-Cl4
MW 318.02, MP 88.4 C

Snake, water
NERODIA (NATRIX) RHOMBIFERA

Tissue	Cases Exposure Route	Range	Mean	General Information
4101 Adipose	21	1.92-4.66 ppm	Not given	Thomas Point, Brusly and Belle Helene sites, collected between 1977 & 79. Residue detected in 21 of 21. Range of means. Louisiana, Mississippi River, near Baton Rouge GC-EC

ADIPOSE TISSUE; LIVER; MUSCLES; BODY; SNAKES; AQUATIC; ENVIRONMENTAL EXPOSURE; LOUISIANA; CHLORINE ORGANIC COMPOUNDS; LINDANE; ALDRIN; DIELDRIN; HEPTACHLOR EPOXIDE; HEXACHLOROBENZENE; DDT; DDE; DDE; POLYCHLORINATED BIPHENYLS; FISHES; AGRICULTURE; BIOMAGNIFICATION; BIOCONCENTRATION; PESTICIDE RESIDUES; WATER POLLUTION

Sabourin, T.D.; Stickle, W.B.; Michot, C.E.; Garton, D.W.; Mushinsky, H.R. 1984 Bulletin of Environmental Contamination and Toxicology 32:460-468

Tissue	Cases Exposure Route	Range	Mean	General Information
4102 Body	a) 10 b) 10 c) 6	a) 3.07-14.0 ppm b) 0.34-28.1 ppm c) 0.06-6.07 ppm Wet wt	a) 6.72 ppm b) 4.47 ppm c) 1.18 ppm Wet wt	a) Lake Providence, 3.7% lipids b) Lake Bruin, 3.7% lipids c) Lake St. John, 6.6% lipids Collected 6/15-9/25/80. Tertiary consumers, major foods are fish and frogs. Lakes acting as sumps. Louisiana GC

BODY; ENVIRONMENTAL EXPOSURE; LOUISIANA; CHLORINE ORGANIC COMPOUNDS; INSECTICIDES; BIOMAGNIFICATION; FISHES; AGRICULTURE; PESTICIDE RESIDUES; AQUATIC; TERRESTRIAL; BIRDS; SNAKES; FROGS; CRAYFISH

Niethammer, K.R.; White, D.H.; Baskett, T.S.; Sayre, M.W. 1984 Archives of Contamination and Toxicology 13:63-74

Tissue	Cases Exposure Route	Range	Mean	General Information
4103 Liver	28	0.08-0.21 ppm	Not given	Thomas Point, Brusly and Belle Helene sites, collected between 1977 & 79. Residue detected in 16 of 28. Range of means. Louisiana, Mississippi River, near Baton Rouge GC-EC
4104 Muscle	28	0.01-0.02 ppm	Not given	Thomas Point, Brusly, Belle Helene sites, collected between 1977 & 79. Residues detected in 25 of 28. Range of means. Louisiana, Mississippi River, near Baton Rouge GC-EC

ADIPOSE TISSUE; LIVER; MUSCLES; BODY; SNAKES; AQUATIC; ENVIRONMENTAL EXPOSURE; LOUISIANA; CHLORINE ORGANIC COMPOUNDS; LINDANE; ALDRIN; DIELDRIN; HEPTACHLOR EPOXIDE; HEXACHLOROBENZENE; DDT; DDE; DDE; POLYCHLORINATED BIPHENYLS; FISHES; AGRICULTURE; BIOMAGNIFICATION; BIOCONCENTRATION; PESTICIDE RESIDUES; WATER POLLUTION

Sabourin, T.D.; Stickle, W.B.; Michot, C.E.; Garton, D.W.; Mushinsky, H.R. 1984 Bulletin of Environmental Contamination and Toxicology 32:460-468

Ethylene, 1,1-dichloro-2,2-bis(p-chlorophenyl)- (8 CI); Benzene, 1,1'-(dichloroethenylidene)bis(4-chloro- (9 CI)
72-55-9
C14-H8-Cl4
MW 318.02, MP 88.4 C

Starling
STURNUS VULGARIS

Tissue	Cases Exposure Route	Range	Mean	General Information
4105 Brain	a) 5 b) 5 Ingestion	a) 475-625 ppm b) 85-160 ppm Wet wt	a) Not given b) 119 ppm	a) Dead within 5 days b) Sacrificed on day 5 Fed 1500 ppm DDE for 5 days. Estimated from figure. Maryland, Eastern GC
BODY; BRAIN; TERRESTRIAL; BIRDS; DELIBERATE EXPOSURE; MARYLAND; COMPARATIVE EVALUATIONS; CHLORINATED HYDROCARBONS; DDE; LIPIDS; BIOACCUMULATION; DIETS				
Stickel, W.H.; Stickel, L.F.; Dyrland, R.A.; Hughes, D.L. 1984 Archives of Environmental Contamination and Toxicology 13:1-6				

Sucker, longnose
CATOSTOMUS CATOSTOMUS

Tissue	Cases Exposure Route	Range	Mean	General Information
4106 Adipose	54 Ingestion	a) 0.027-0.622 mg/kg b) Not detected-0.102 mg/kg Wet wt	a) 0.123 mg/kg b) 0.080 mg/kg Wet wt	a) North Saskatchewan River below Edmonton b) Oldman River Intestinal fat. Canada, Alberta GC-EC
FISHES; CANADA; PESTICIDE RESIDUES; CHLORINE ORGANIC COMPOUNDS; POLYCHLORINATED BIPHENYLS; BIOLOGICAL MONITORING; AQUATIC; BIOCONCENTRATION; ENVIRONMENTAL EXPOSURE; WATER POLLUTION; POLYCHLORINATED BIPHENYLS; DDE; DDD; DIELDRIN; HEXACHLOROBENZENE; HEXACHLOROCYCLOHEXANE				
Chovelon, A.; George, L.; Gulayets, C.; Hoyano, Y.; McGuinness, E.; Moore, J.; Ramamoorthy, S.; Ramamoorthy, S.; Singer, P.; Smiley, K.; Wheatly A. 1984 Chemosphere 13(1)19-32				

Sucker, white
CATOSTOMUS COMMERSONI

Tissue	Cases Exposure Route	Range	Mean	General Information
4107 Adipose	a) 40 b) 20 c) 16 d) 17 Ingestion	a) Not detected-0.823 mg/kg b) Not detected-0.024 mg/kg c) 0.010-0.130 mg/kg d) 0.002-0.052 mg/kg Wet wt	a) 0.211 mg/kg b) 0.009 mg/kg c) 0.037 mg/kg d) 0.020 mg/kg Wet wt	a) North Saskatchewan River below Edmonton b) Battle River c) Beaver River d) Lake Wabamun Intestinal fat. Canada, Alberta GC-EC
FISHES; CANADA; PESTICIDE RESIDUES; CHLORINE ORGANIC COMPOUNDS; POLYCHLORINATED BIPHENYLS; BIOLOGICAL MONITORING; AQUATIC; BIOCONCENTRATION; ENVIRONMENTAL EXPOSURE; WATER POLLUTION; POLYCHLORINATED BIPHENYLS; DDE; DDD; DIELDRIN; HEXACHLOROBENZENE; HEXACHLOROCYCLOHEXANE				
Chovelon, A.; George, L.; Gulayets, C.; Hoyano, Y.; McGuinness, E.; Moore, J.; Ramamoorthy, S.; Ramamoorthy, S.; Singer, P.; Smiley, K.; Wheatly A. 1984 Chemosphere 13(1)19-32				

Ethylene, 1,1-dichloro-2,2-bis(p-chlorophenyl)- (8 CI); Benzene, 1,1'-(dichloroethenylidene)bis(4-chloro- (9 CI)
72-55-9
C14-H8-Cl4
MW 318.02, MP 88.4 C

Teal, green-winged
ANAS CAROLINENSIS

Tissue	Cases Exposure Route	Range	Mean	General Information
4108 Adipose	2	Not applicable	0.01 ug/g Wet wt	Juveniles shot 10/79. Subcutaneous fat. No significant difference in levels due to age, sex or collection site among 11 total species. New York, Hudson River GC-EC

ADIPOSE TISSUE; BRAIN; BREAST; LIVER; MUSCLES; BIRDS; ENVIRONMENTAL EXPOSURE; NEW YORK; ADULTS; JUVENILES; SEX; COMPARATIVE EVALUATIONS; CHLORINATED HYDROCARBONS; CHLORINE ORGANIC COMPOUNDS; DDE; INSECTICIDES; POLYCHLORINATED BIPHENYLS; BIOACCUMULATION; PESTICIDE RESIDUES; WATERFOWL; AQUATIC
Kim, K.S.; Pastel, M.J.; Kim, J.S.; Stone, W.B. 1984 Archives of Environmental Contamination and Toxicology 13:373-381

Tern, roseate
STERNA DOUGALLII

Tissue	Cases Exposure Route	Range	Mean	General Information
4100 Eggs	3	0.02-0.06 ug/g	0.04 ug/g	In all eggs. Levels well below those considered to adversely affect reproduction or shell thickness. Marine species generally less contaminated than estuarine/freshwater feeders. South Africa, Eastern Cape GC/MS

BIRDS; AQUATIC; SOUTH AFRICA; CHLORINATED HYDROCARBONS; CHLORINE ORGANIC COMPOUNDS; DDE; DDT; DIELDRIN; PESTICIDES; INSECTICIDES; POLYCHLORINATED BIPHENYLS; BIOACCUMULATION; BIOINDICATORS; PESTICIDE RESIDUES; WATER POLLUTION; ENVIRONMENTAL EXPOSURE
de Kock, A.C.; Randall, R.M. 1984 Environmental Pollution (Series A) 35:193-201

Tilapia
TILAPIA sp

Tissue	Cases Exposure Route	Range	Mean	General Information
4110 Muscle	Ingestion	a) 0.2-2.19 ug/L b) 1.35-9.79 ug/L c) 3.50-9.79 ug/L d) 0.2-4.01 ug/L e) 12.14-31.25 ug/L f) 0.2-4.19 ug/L g) 0.2-6.44 ug/L h) 1.00-18.62 ug/L	a) 1.18 ug/L b) 3.20 ug/L c) 7.00 ug/L d) 1.70 ug/L e) 21.90 ug/L f) 2.20 ug/L g) 3.15 ug/L h) 8.50 ug/L	a) Aswan b) Assiut c) Cairo d) El-Mansora e) Paraskour f) Edfina g) El-Mahmodia canal h) Abo El-Gheit canal 80 composite samples, approx 5 fish each. Sites a) near Lake Nassar, c), f) near Mediterranean Sea on the Nile river, g), h) in agricultural areas polluted with pesticides (application, leachates). Egypt, Nile River and canals GC-EC

PESTICIDE RESIDUES; FISHES; MUSCLES; EGYPT; AQUATIC; CHLORINE ORGANIC COMPOUNDS; DDT; DDE; BIOLOGICAL MONITORING; WATER POLLUTION; METABOLITES; LINDANE; INSECTICIDES; ENVIRONMENTAL EXPOSURE; HEXACHLOROCYCLOHEXANE
Aly, O.A.; Badawy, M.I. 1984 Bulletin of Environmental Contamination and Toxicology 33:246-252

Ethylene, 1,1-dichloro-2,2-bis(p-chlorophenyl)- (8 CI); Benzene, 1,1'-(dichloroethenylidene)bis(4-chloro- (9 CI)
72-55-9
C14-H8-Cl4
MW 318.02, MP 88.4 C

Trout, brown
SALMO TRUTTA

Tissue	Cases Exposure Route	Range	Mean	General Information
4111 Adipose	22 Ingestion	0.151-0.682 mg/kg Wet wt	0.313 mg/kg Wet wt	Bow River below Calgary Intestinal fat. Canada, Alberta GC-EC
FISHES; CANADA; PESTICIDE RESIDUES; CHLORINE ORGANIC COMPOUNDS; POLYCHLORINATED BIPHENYLS; BIOLOGICAL MONITORING; AQUATIC; BIOCONCENTRATION; ENVIRONMENTAL EXPOSURE; WATER POLLUTION; POLYCHLORINATED BIPHENYLS; DDE; DDD; DIELDRIN; HEXACHLOROBENZENE; HEXACHLOROCYCLOHEXANE				
Chovelon, A.; George, L.; Gulayets, C.; Hoyano, Y.; McGuinness, E.; Moore, J.; Ramamoorthy, S.; Ramamoorthy, S.; Singer, P.; Smiley, K.; Wheatly A. 1984 Chemosphere 13(1)19-32				

Turtle, green
CHELONIA MYDAS

Tissue	Cases Exposure Route	Range	Mean	General Information
4112 Liver	4	Not detected-10 ppb	Not given	Natural mortalities, wt 4-12 kg, estimated ages 2-7 yr Florida, East coast GC-EC
4113 Muscle	4	Not detected-1 ppb	Not given	Natural mortalities, wt 4-12 kg, estimated ages 2-7 yr Florida, East coast GC-EC
FLORIDA; MUSCLES; LIVER; DDE; POLYCHLORINATED BIPHENYLS; TURTLES; BIOACCUMULATION				
McKim, J.M., Jr.; Johnson, K.L. 1983 Bulletin of Environmental Contamination and Toxicology 31:53-60				

Turtle, loggerhead
CARETTA CARETTA

Tissue	Cases Exposure Route	Range	Mean	General Information
4114 Liver	8	2-100 ppb	22 ppb	Natural mortalities, wt 18-61 kg, estimated ages 12-34 kg Florida, East coast GC-EC
4115 Muscle	9	1-45 ppb	8 ppb	Natural mortalities, wt 18-61 kg, estimated ages 12-34 kg Florida, East coast GC-EC
FLORIDA; MUSCLES; LIVER; DDE; POLYCHLORINATED BIPHENYLS; TURTLES; BIOACCUMULATION				
McKim, J.M., Jr.; Johnson, K.L. 1983 Bulletin of Environmental Contamination and Toxicology 31:53-60				

Ethylene, 1,1-dichloro-2,2-bis(p-chlorophenyl)- (8 CI); Benzene, 1,1'-(dichloroethenylidene)bis(4-chloro- (9 CI)

72-55-9
C14-H8-Cl4
MW 318.02, MP 88.4 C

Walleye
STIZOSTEDION VITREUM VITREUM

Tissue	Cases Exposure Route	Range	Mean	General Information
4116 Adipose	a) 65 b) 21 c) 17 d) 23 Ingestion	a) 0.048-1.32 mg/kg b) 0.008-1.93 mg/kg c) 0.205-1.53 mg/kg d) 0.183-0.727 mg/kg Wet wt	a) 0.372 mg/kg b) 0.241 mg/kg c) 0.869 mg/kg d) 0.390 mg/kg Wet wt	a) North Saskatchewan River below Edmonton b) Beaver River c) Bow River below Calgary d) St. Mary's River Intestinal fat. Canada, Alberta GC-EC
FISHES; CANADA; PESTICIDE RESIDUES; CHLORINE ORGANIC COMPOUNDS; PCLYCHLORINATED BIPHENYLS; BIOLOGICAL MONITORING; AQUATIC; BIOCONCENTRATION; ENVIRONMENTAL EXPOSURE; WATER POLLUTION; POLYCHLORINATED BIPHENYLS; DDE; DDD; DIELDRIN; HEXACHLOROBENZENE; HEXACHLOROCYCLOHEXANE Chovelon, A.; George, L.; Gulayets, C.; Hoyano, Y.; McGuinness, E.; Moore, J.; Ramamoorthy, S.; Ramamoorthy, S.; Singer, P.; Smiley, K.; Wheatly A. 1984 Chemosphere 13(1)19-32				

White fish, mountain
PROSOPIUM WILLIAMSONI

Tissue	Cases Exposure Route	Range	Mean	General Information
4117 Adipose	60 Ingestion	0.070-1.44 mg/kg Wet wt	0.514 mg/kg Wet wt	Bow River below Calgary Intestinal fat. Canada, Alberta GC-EC
FISHES; CANADA; PESTICIDE RESIDUES; CHLORINE ORGANIC COMPOUNDS; POLYCHLORINATED BIPHENYLS; BIOLOGICAL MONITORING; AQUATIC; BIOCONCENTRATION; ENVIRONMENTAL EXPOSURE; WATER POLLUTION; POLYCHLORINATED BIPHENYLS; DDE; DDD; DIELDRIN; HEXACHLOROBENZENE; HEXACHLOROCYCLOHEXANE Chovelon, A.; George, L.; Gulayets, C.; Hoyano, Y.; McGuinness, E.; Moore, J.; Ramamoorthy, S.; Ramamoorthy, S.; Singer, P.; Smiley, K.; Wheatly A. 1984 Chemosphere 13(1)19-32				

Whitefish, lake
COREGONUS CLUPEAFORMIS

Tissue	Cases Exposure Route	Range	Mean	General Information
4118 Adipose	a) 21 b) 19 c) 14 d) 25 Ingestion	a) 0.025-0.144 mg/kg b) 0.046-0.140 mg/kg c) Not detected-0.115 mg/kg d) 0.029-0.131 mg/kg Wet wt	a) 0.067 mg/kg b) 0.090 mg/kg c) 0.034 mg/kg d) 0.088 mg/kg Wet wt	a) Red Deer River below city of Red Deer b) Lake Newell c) McGregor Lake d) Bow River below Calgary Intestinal fat. Canada, Alberta GC-EC
FISHES; CANADA; PESTICIDE RESIDUES; CHLORINE ORGANIC COMPOUNDS; POLYCHLORINATED BIPHENYLS; BIOLOGICAL MONITORING; AQUATIC; BIOCONCENTRATION; ENVIRONMENTAL EXPOSURE; WATER POLLUTION; POLYCHLORINATED BIPHENYLS; DDE; DDD; DIELDRIN; HEXACHLOROBENZENE; HEXACHLOROCYCLOHEXANE Chovelon, A.; George, L.; Gulayets, C.; Hoyano, Y.; McGuinness, E.; Moore, J.; Ramamoorthy, S.; Ramamoorthy, S.; Singer, P.; Smiley, K.; Wheatly A. 1984 Chemosphere 13(1)19-32				

Ethylene, 1,1-dichloro-2,2-bis(p-chlorophenyl)- (8 CI); Benzene, 1,1'-(dichloroethenylidene)bis(4-chloro- (9 CI)
72-55-9
C14-H8-Cl4
MW 318.02, MP 88.4 C
Woodcock
PHILOHELA MINOR

Tissue	Cases Exposure Route	Range	Mean	General Information
4119 Brain	3	<0.0001-0.0580 ppm	0.0039 ppm	None in 14 birds (same species). Illinois, Vermilion and Shelby Counties GC-EC
4120 Heart	3	<0.0001-0.126 ppm	0.0173 ppm	None in 12 birds (same species). Illinois, Vermilion and Shelby Counties GC-EC
4121 Liver	2	<0.0001-0.766 ppm	0.0806 ppm	None in 9 birds (same species). Illinois, Vermilion and Shelby Counties GC-EC
4122 Muscle	3	<0.0001-0.0620 ppm	0.0074 ppm	None in 12 birds (same species). Illinois, Vermilion and Shelby Counties GC-EC

ADIPOSE TISSUE; BRAIN; MUSCLES; LIVER; HEART; TERRESTRIAL; BIRDS; ENVIRONMENTAL EXPOSURE; ILLINOIS; CHLORINATED HYDROCARBONS; CHLORINE ORGANIC COMPOUNDS; DDE; DIELDRIN; HEPTACHLOR EPOXIDE; INSECTICIDES; PESTICIDES; POLYCHLORINATED BIPHENYLS; BIOACCUMULATION; FOOD CONTAMINATION; PESTICIDE RESIDUES

Edwards, W.R.; Dusan, R.E.; Siemers, R.J. 1983 Bulletin of Environmental Contamination and Toxicology 31:407-414

Ethylene, 2-chloro-1,1-bis(p-chlorophenyl)- (8 CI); Benzene, 1,1'-(chloroethenylidene)bis(4-chloro- (9 CI)
1022-22-6
C14-H9-Cl3
Bass, largemouth
MICROPTERUS SALMOIDES

Tissue	Cases Exposure Route	Range	Mean	General Information
4123 Body	a) 5 b) 5	a) 0.83-1.21 ppm b) 0.29-0.60 ppm Wet wt	a) 0.92 ppm b) 0.41 ppm Wet wt	a) Lake Providence, 7.3% lipids b) Lake Bruin, 9.2% lipids Collected 6/15-9/25/80. Tertiary consumers, major foods are fish and crayfish. Lakes acting as sumps. Louisiana GC

BODY; ENVIRONMENTAL EXPOSURE; LOUISIANA; CHLORINE ORGANIC COMPOUNDS; INSECTICIDES; BIOMAGNIFICATION; FISHES; AGRICULTURE; PESTICIDE RESIDUES; AQUATIC; TERRESTRIAL; BIRDS; SNAKES; FROGS; CRAYFISH

Niethammer, K.R.; White, D.H.; Baskett, T.S.; Sayre, M.W. 1984 Archives of Contamination and Toxicology 13:63-74

Ethylene, 2-chloro-1,1-bis(p-chlorophenyl)- (8 CI); Benzene, 1,1'-(chloroethenylidene)bis(4-chloro- (9 CI)
1022-22-6
C14-H9-Cl3
Bluegill
LEPOMIS MACROCHIRUS

Tissue	Cases Exposure Route	Range	Mean	General Information
4124 Body	a) 5 b) 5	a) 0.29-0.40 ppm b) 0.07-0.17 ppm Wet wt	a) 0.34 ppm b) 0.12 ppm Wet wt	a) Lake Providence, 3.3% lipids b) Lake Bruin, 2.2% lipids Collected 6/15-9/25/80. Secondary consumers, major foods are fish. Lakes acting as sumps. Louisiana GC

BODY; ENVIRONMENTAL EXPOSURE; LOUISIANA; CHLORINE ORGANIC COMPOUNDS; INSECTICIDES; BIOMAGNIFICATION; FISHES; AGRICULTURE; PESTICIDE RESIDUES; AQUATIC; TERRESTRIAL; BIRDS; SNAKES; FROGS; CRAYFISH
Niethammer, K.R.; White, D.H.; Baskett, T.S.; Sayre, M.W. 1984 Archives of Contamination and Toxicology 13:63-74

Catfish, channel
ICTALURUS PUNETATUS

Tissue	Cases Exposure Route	Range	Mean	General Information
4125 Body	4	0.15-1.20 ppm Wet wt	0.59 ppm Wet wt	Lake Providence, 2.9% lipids. Collected 6/15-9/25/80. Tertiary consumers, major foods are fish and insects. Lakes acting as sumps. Louisiana GC

BODY; ENVIRONMENTAL EXPOSURE; LOUISIANA; CHLORINE ORGANIC COMPOUNDS; INSECTICIDES; BIOMAGNIFICATION; FISHES; AGRICULTURE; PESTICIDE RESIDUES; AQUATIC; TERRESTRIAL; BIRDS; SNAKES; FROGS; CRAYFISH
Niethammer, K.R.; White, D.H.; Baskett, T.S.; Sayre, M.W. 1984 Archives of Contamination and Toxicology 13:63-74

Coot, American
FULICA AMERICANA

Tissue	Cases Exposure Route	Range	Mean	General Information
4126 Body	3	Not detected-0.40 ppm Wet wt	0.10 ppm Wet wt	Lake Providence, 10.6% lipids. Collected 2/80. Secondary consumers. Lakes acting as sumps. Louisiana GC

BODY; ENVIRONMENTAL EXPOSURE; LOUISIANA; CHLORINE ORGANIC COMPOUNDS; INSECTICIDES; BIOMAGNIFICATION; FISHES; AGRICULTURE; PESTICIDE RESIDUES; AQUATIC; TERRESTRIAL; BIRDS; SNAKES; FROGS; CRAYFISH
Niethammer, K.R.; White, D.H.; Baskett, T.S.; Sayre, M.W. 1984 Archives of Contamination and Toxicology 13:63-74

Ethylene, 2-chloro-1,1-bis(p-chlorophenyl)- (8 CI); Benzene, 1,1'-(chloroethenylidene)bis(4-chloro- (9 CI)
1022-22-6
C14-H9-Cl3
Cottonmouth
AGKISTRODON PISCIVOROUS

Tissue	Cases Exposure Route	Range	Mean	General Information
4127 Body	a) 6 b) 1	a) Not detected-0.61 ppm b) Not detected-0.05 ppm Wet wt	a) 0.07 ppm b) 0.03 ppm Wet wt	a) Lake Providence, 4.3% lipids b) Lake Bruin, 2.5% lipids Collected 6/15-9/25/80. Tertiary consumers, major foods are snakes, fish and frogs. Lakes acting as sumps. Louisiana GC

BODY; ENVIRONMENTAL EXPOSURE; LOUISIANA; CHLORINE ORGANIC COMPOUNDS; INSECTICIDES; BIOMAGNIFICATION; FISHES; AGRICULTURE; PESTICIDE RESIDUES; AQUATIC; TERRESTRIAL; BIRDS; SNAKES; FROGS; CRAYFISH
Niethammer, K.R.; White, D.H.; Baskett, T.S.; Sayre, M.W. 1984 Archives of Contamination and Toxicology 13:63-74

Gar, spotted
LEPISOSTEUS OCULATUS

Tissue	Cases Exposure Route	Range	Mean	General Information
4128 Body	a) 1 b) 5	a) Not given b) 0.28-0.40 ppm Wet wt	a) 1.80 ppm b) 0.32 Wet wt	a) Lake Providence, 11.1% lipids b) Lake Bruin, 2.7% lipids Collected 6/15-9/25/80. Tertiary consumers, major foods are fish. Lakes acting as sumps. Louisiana GC

BODY; ENVIRONMENTAL EXPOSURE; LOUISIANA; CHLORINE ORGANIC COMPOUNDS; INSECTICIDES; BIOMAGNIFICATION; FISHES; AGRICULTURE; PESTICIDE RESIDUES; AQUATIC; TERRESTRIAL; BIRDS; SNAKES; FROGS; CRAYFISH
Niethammer, K.R.; White, D.H.; Baskett, T.S.; Sayre, M.W. 1984 Archives of Contamination and Toxicology 13:63-74

Heron, green-backed
BUTORIDES STRIATUS

Tissue	Cases Exposure Route	Range	Mean	General Information
4129 Adipose	4 Ingestion	Not given	8 ppm Wet wt	Composite from birds shot in 1980. Residues linked to fish diet. Louisiana, Lake Providence GC; GC/MS
4130 Body	a) 12 b) 14 Ingestion	a) Not detected-1.51 ppm b) Not detected-1.78 ppm Wet wt	a) 0.31 ppm b) 0.40 ppm Wet wt Geometric means	a) Adults, mean lipid 16.2%, 10 had detectable levels b) Immature, mean lipid 14.8%, 13 had detectable levels Collected (shot) in 1980. Beak, feet, wing tips, skin, GI tract removed before homogenization. Residues linked to fish diet. Louisiana, Lake Province, Lake Bruin, Lake St. John GC; GC/MS

CHLORINE ORGANIC COMPOUNDS; FISHES; LOUISIANA; PESTICIDE RESIDUES; BIOACCUMULATION; DIETS; ADIPOSE TISSUE; LIVER; MUSCLES; BRAIN; BIOLOGICAL MONITORING; ENVIRONMENTAL EXPOSURE; BIRDS; WATERFOWL; AQUATIC; TERRESTRIAL; WATER POLLUTION; DDD; DDE; DDT; DIELDRIN; POLYCHLORINATED BIPHENYLS
Niethammer, K.R.; Baskett, T.S.; White, D.H. 1984 Bulletin of Environmental Contamination and Toxicology 33:491-498

Ethylene, 2-chloro-1,1-bis(p-chlorophenyl)- (8 CI); Bensene, 1,1'-(chloroethenylidene)bis(4-chloro- (9 CI)
1022-22-6
C14-H9-Cl3

Heron, green-backed
BUTORIDES STRIATUS

Tissue	Cases Exposure Route	Range	Mean	General Information
4131 Body	a) 9 b) 9 c) 5	a) Not detected-1.78 ppm b) Not detected-1.25 ppm c) Not detected-0.93 ppm Wet wt	a) 0.58 ppm b) 0.30 ppm c) 0.21 ppm Wet wt	a) Lake Providence, 11.4% lipids b) Lake Bruin, 12.9% lipids c) Lake St. John, 26.7% lipids Collected between 6/15-9/25/80. Tertiary consumers, major foods are fish. Lakes acting as sumps. Immature birds are good monitors of contamination. Louisiana GC

BODY; ENVIRONMENTAL EXPOSURE; LOUISIANA; CHLORINE ORGANIC COMPOUNDS; INSECTICIDES; BIOMAGNIFICATION; FISHES; AGRICULTURE; PESTICIDE RESIDUES; AQUATIC; TERRESTRIAL; BIRDS; SNAKES; FROGS; CRAYFISH
Niethammer, K.R.; White, D.H.; Baskett, T.S.; Sayre, M.W. 1984 Archives of Contamination and Toxicology 13:63-74

Tissue	Cases Exposure Route	Range	Mean	General Information
4132 Liver	4 Ingestion	Not given	0.23 ppm Wet wt	Composite from birds shot in 1980. Residues linked to fish diet. Louisiana, Lake Providence GC; GC/MS
4133 Muscle	4 Ingestion	Not given	0.10 ppm Wet wt	Composite from birds shot in 1980. Residues linked to fish diet. Louisiana, Lake Providence GC; GC/MS

CHLORINE ORGANIC COMPOUNDS; FISHES; LOUISIANA; PESTICIDE RESIDUES; BIOACCUMULATION; DIETS; ADIPOSE TISSUE; LIVER; MUSCLES; BRAIN; BIOLOGICAL MONITORING; ENVIRONMENTAL EXPOSURE; BIRDS; WATERFOWL; AQUATIC; TERRESTRIAL; WATER POLLUTION; DDD; DDE; DDT; DIELDRIN; POLYCHLORINATED BIPHENYLS
Niethammer, K.R.; Baskett, T.S.; White, D.H. 1984 Bulletin of Environmental Contamination and Toxicology 33:491-498

Heron, little blue
EGRETTA CAERULEA

Tissue	Cases Exposure Route	Range	Mean	General Information
4134 Body	a) 6 b) 15 Ingestion	a) Not detected-1.04 ppm b) Not detected-0.34 ppm Wet wt	a) 0.16 ppm b) 0.07 ppm Wet wt Geometric means	a) Adults, 4 had detectable levels, mean lipid 10.8% b) Immature, 9 had detectable levels, mean lipid 8.2% Collected (shot) 1980. Beak, feet, skin, wing tips and GI tracts removed before homogenization. Moderate residues linked to mixed diet of fish, crustaceans and insects. Louisana, Lake Providence, Lake Bruin, Lake St. John GC; GC/MS

CHLORINE ORGANIC COMPOUNDS; FISHES; LOUISIANA; PESTICIDE RESIDUES; BIOACCUMULATION; DIETS; ADIPOSE TISSUE; LIVER; MUSCLES; BRAIN; BIOLOGICAL MONITORING; ENVIRONMENTAL EXPOSURE; BIRDS; WATERFOWL; AQUATIC; TERRESTRIAL; WATER POLLUTION; DDD; DDE; DDT; DIELDRIN; POLYCHLORINATED BIPHENYLS
Niethammer, K.R.; Baskett, T.S.; White, D.H. 1984 Bulletin of Environmental Contamination and Toxicology 33:491-498

Ethylene, 2-chloro-1,1-bis(p-chlorophenyl)- (8 CI); Benzene, 1,1'-(chloroethenylidene)bis(4-chloro- (9 CI)
1022-22-6
C14-H9-Cl3

Heron, little blue
EGRETTA CAERULEA

Tissue	Cases Exposure Route	Range	Mean	General Information
4135 Body	a) 5 b) 6 c) 2	a) 0.08-0.17 ppm b) Not detected-1.04 ppm c) Not detected-0.29 ppm Wet wt	a) 0.11 ppm b) 0.12 ppm c) 0.05 ppm Wet wt	a) Lake Providence, 3.7% lipids b) Lake Bruin, 6.0% lipids c) Lake St. John, 18.2% lipids Collected 6/15-9/25/80. Tertiary consumer, major foods are small fish and invertebrates. Lakes acting as sumps. Louisiana GC

BODY; ENVIRONMENTAL EXPOSURE; LOUISIANA; CHLORINE ORGANIC COMPOUNDS; INSECTICIDES; BIOMAGNIFICATION; FISHES; AGRICULTURE; PESTICIDE RESIDUES; AQUATIC; TERRESTRIAL; BIRDS; SNAKES; FROGS; CRAYFISH

Niethammer, K.R.; White, D.H.; Baskett, T.S.; Sayre, M.W. 1984 Archives of Contamination and Toxicology 13:63-74

Mosquitofish
GAMBUSIA AFFINIS

Tissue	Cases Exposure Route	Range	Mean	General Information
4136 Body	a) 5 b) 3	a) 0.18-0.25 ppm b) Not detected-0.23 ppm Wet wt	a) 0.21 ppm b) 0.08 ppm Wet wt	a) Lake Providence, 2.6% lipids b) Lake Bruin, 2.4% lipids. Collected 6/15-9/25/80. Secondary consumers, major foods are small invertebrates. Lakes acting as sumps. Louisiana GC

BODY; ENVIRONMENTAL EXPOSURE; LOUISIANA; CHLORINE ORGANIC COMPOUNDS; INSECTICIDES; BIOMAGNIFICATION; FISHES; AGRICULTURE; PESTICIDE RESIDUES; AQUATIC; TERRESTRIAL; BIRDS; SNAKES; FROGS; CRAYFISH

Niethammer, K.R.; White, D.H.; Baskett, T.S.; Sayre, M.W. 1984 Archives of Contamination and Toxicology 13:63-74

Shad, threadfin
DOROSOMA PETENENSE

Tissue	Cases Exposure Route	Range	Mean	General Information
4137 Body	a) 4 b) 5	a) 0.15-3.34 ppm b) 0.13-0.33 ppm Wet wt	a) 0.60 ppm b) 0.20 ppm Wet wt	a) Lake Providence, 4.4% lipids b) Lake Bruin, 5.0% lipids Collected 6/15-9/25/80. Primary consumers, major foods are green algae and protozoans. Lakes acting as sumps. Louisiana GC

BODY; ENVIRONMENTAL EXPOSURE; LOUISIANA; CHLORINE ORGANIC COMPOUNDS; INSECTICIDES; BIOMAGNIFICATION; FISHES; AGRICULTURE; PESTICIDE RESIDUES; AQUATIC; TERRESTRIAL; BIRDS; SNAKES; FROGS; CRAYFISH

Niethammer, K.R.; White, D.H.; Baskett, T.S.; Sayre, M.W. 1984 Archives of Contamination and Toxicology 13:63-74

Ethylene, 2-chloro-1,1-bis(p-chlorophenyl)- (8 CI); Benzene, 1,1'-(chloroethenylidene)bis(4-chloro- (9 CI)
1022-22-6
C14-H9-Cl3
Shiner, blacktail
NOTROPIS VENUSTUS

Tissue	Cases Exposure Route	Range	Mean	General Information
4188 Body	a) 5 b) 5	a0 0.33-0.55 ppm b) 0.18-0.25 ppm Wet wt	a) 0.42 ppm b) 0.21 ppm Wet wt	a) Lake Providence, 4.8% lipids b) Lake Bruin, 6.8% lipids. Collected 6/15-9/25/80. Secondary consumers, major foods are small invertebrates. Lakes acting as sumps. Louisiana GC

BODY; ENVIRONMENTAL EXPOSURE; LOUISIANA; CHLORINE ORGANIC COMPOUNDS; INSECTICIDES; BIOMAGNIFICATION; FISHES; AGRICULTURE; PESTICIDE RESIDUES; AQUATIC; TERRESTRIAL; BIRDS; SNAKES; FROGS; CRAYFISH
Niethammer, K.R.; White, D.H.; Baskett, T.S.; Sayre, M.W. 1984 Archives of Contamination and Toxicology 13:63-74

Snake, water
NERODIA sp.

Tissue	Cases Exposure Route	Range	Mean	General Information
4189 Body	a) 9 b) 6 c) 1	a) Not detected-0.56 ppm b) Not detected-0.38 ppm c) Not detected-0.20 ppm Wet wt	a) 0.16 ppm b) 0.09 ppm c) 0.04 ppm Wet wt	a) Lake Providence, 3.7% lipids b) Lake Bruin, 3.7% lipids c) Lake St. John, 6.6% lipids Collected 6/15-9/25/80. Tertiary consumers, major foods are fish and frogs. Lakes acting as sumps. Louisiana GC

BODY; ENVIRONMENTAL EXPOSURE; LOUISIANA; CHLORINE ORGANIC COMPOUNDS; INSECTICIDES; BIOMAGNIFICATION; FISHES; AGRICULTURE; PESTICIDE RESIDUES; AQUATIC; TERRESTRIAL; BIRDS; SNAKES; FROGS; CRAYFISH
Niethammer, K.R.; White, D.H.; Baskett, T.S.; Sayre, M.W. 1984 Archives of Contamination and Toxicology 13:63-74

Ethylenediamine, dihydriodide (8 CI); 1,2-Ethanediamine, dihydriodide (9 CI)
5700-49-2
C2-H8-N2.2H-I
MW 315.92
Cattle, Hereford
BOS sp.

Tissue	Cases Exposure Route	Range	Mean	General Information
4140 Blood, serum	68 Ingestion	a) 379-71 ug/dl b) 78-77 ug/dl c) 22-74 ug/dl d) 6-34 ug/dl e) 350-36 ug/dl f) 58-14 ug/dl g) 67-14 ug/dl h) 9-9 ug/dl i) 75-62 ug/dl	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given g) Not given h) Not given i) Not given	a) 200 mg, capsule 8 cases b) 50 mg, capsule 8 cases c) 12.5 mg, capsule 8 cases d) 0.0 mg, capsule, placebo 8 cases e) 200 mg, feed premix 9 cases f) 30 mg, feed premix 9 cases g) 30 mg, capsule 9 cases h) 0.0 mg, feed premix, placebo 9 cases i) Same as g), 3-24 hr after dose, estimated from graph Daily dosages. a)-d) 18th dose thru 36th d after dosing ended, mean wt 287 kg. e)-h) 25th dose thru 19th d after dosing ended, mean wt 268 kg. All animals previously inoculated with bacteria to induce foot rot. Ranges of means. Kansas City, stockyards Colorimetry
CATTLE; TERRESTRIAL; BLOOD SERUM; DELIBERATE EXPOSURE; DRUGS; COMPARATIVE EVALUATIONS; IODINE; ANIMAL FEEDS				
Berg, J.N.; Maas, J.P.; Paterson, J.A.; Krause, G.F.; Davis, L.E. 1984 American Journal of Veterinary Research 45(6):1073-1078				

Eulan WA New
55069-01-7
EXACT COMPOSITION UNKNOWN OR UNDETERMINED
Goldfish
CARASSIUS AURATUS

Tissue	Cases Exposure Route	Range	Mean	General Information
4141 Bile	Inhalation Dermal	a) Not given b) Not given c) Not given d) Not given	a) <0.01 ug/g b) <0.01 ug/g c) 0.59 ug/g d) 49.20 ug/g	a) 10 min b) 30 min c) 2 hr d) 6.5 hr Immersion times in water with 0.26 mg/L. Results composited bile/liver. Data given for metabolite 5-PAD. Scotland GC-EC; HPLC
4142 Gills	4 Inhalation Dermal	a) Not given b) Not given c) Not given d) Not given	a) 2.18 ug/g b) 9.85 ug/g c) 19.40 ug/g d) 32.78 ug/g	a) 10 min b) 30 min c) 2 hr d) 6.5 hr Immersion times in water with 0.26 mg/L. Data given for metabolite 5-PAD. Scotland GC-EC; HPLC

(next page)

Eulan WA New
55069-01-7
EXACT COMPOSITION UNKNOWN OR UNDETERMINED
Goldfish
CARASSIUS AURATUS

(continued)

Tissue	Cases Exposure Route	Range	Mean	General Information
4143 Gut	4 Inhalation Dermal	a) Not given b) Not given c) Not given d) Not given	a) <0.01 ug/g b) <0.01 ug/g c) 12.17 ug/g d) 44.50 ug/g	a) 10 min b) 30 min c) 2 hr d) 6.5 hr Immersion times in water with 0.26 mg/L. Data given for metabolite 5-PAD. Scotland GC-EC; HPLC
4144 Liver	4 Inhalation Dermal	a) Not given b) Not given c) Not given d) Not given	a) <0.01 ug/g b) <0.01 ug/g c) 0.59 ug/g d) 49.20 ug/g	a) 10 min b) 30 min c) 2 hr d) 6.5 hr Immersion times in water with 0.26 mg/L. Results composited bile/liver. Site of bioconversion. Data given for metabolite 5-PAD. Scotland GC-EC; HPLC
4145 Muscle	4 Inhalation Dermal	a) Not given b) Not given c) Not given d) Not given	a) 0.22 ug/g b) 0.48 ug/g c) 3.44 ug/g d) 11.13 ug/g	a) 10 min b) 30 min c) 2 hr d) 6.5 hr Immersion times in water with 0.26 mg/L. Results composited skin/muscles. Data given for metabolite 5-PAD. Scotland GC-EC; HPLC
4146 Skin	4 Inhalation Dermal	a) Not given b) Not given c) Not given d) Not given	a) 0.22 ug/g b) 0.48 ug/g c) 3.44 ug/g d) 11.13 ug/g	a) 10 min b) 30 min c) 2 hr d) 6.5 hr Immersion times in water with 0.26 mg/L. Results composited skin/muscles. Data given for metabolite 5-PAD. Scotland GC-EC; HPLC

INSECTICIDES; PESTICIDE RESIDUES; METABOLITES; GOLDFISH; GILLS; SCOTLAND; AQUATIC; LIVER; BILE; GUT; SKIN; MUSCLES; BIOCONVERSION; DELIBERATE EXPOSURE; MEASUREMENT METHODS; FISHES; PESTICIDES

Machon,A.; North, M.J.; Price, N.C.; Wells, D.E. 1984 Environmental Pollution (Series A) 36:271-281

Fluoride
16984-48-8
F
AtW 18.9984
Bussard
BUTEO BUTEO

Tissue	Cases Exposure Route	Range	Mean	General Information
4147 Bone	2 Ingestion	Not given	726.6 ug/g Geometric mean	Measured in femur, dead birds collected 1976-1982. Diurnal raptor. United Kingdom
BIRDS; BONES; FLUORIDE; ENVIRONMENTAL EXPOSURE; TERRESTRIAL; UNITED KINGDOM; ADULTS; AQUATIC				
Seel, D.C.; Thomson, A.G. 1984 Environmental Pollution (Series A) 36:367-374				

Grebe, great crested
PODICEPS CRISTATUS

Tissue	Cases Exposure Route	Range	Mean	General Information
4148 Bone	6 Ingestion	Not given	1724.0 ug/g Geometric mean	Measured in femur, dead birds collected 1976-1982. Aquatic habitat. United Kingdom
BIRDS; BONES; FLUORIDE; ENVIRONMENTAL EXPOSURE; TERRESTRIAL; UNITED KINGDOM; ADULTS; AQUATIC				
Seel, D.C.; Thomson, A.G. 1984 Environmental Pollution (Series A) 36:367-374				

Hawk, sparrow
ACCIPITER NISUS

Tissue	Cases Exposure Route	Range	Mean	General Information
4149 Bone	27 Ingestion	Not given	2051.0 ug/g Geometric mean	Measured in femur, dead birds collected 1976-1982. Diurnal raptor. United Kingdom
BIRDS; BONES; FLUORIDE; ENVIRONMENTAL EXPOSURE; TERRESTRIAL; UNITED KINGDOM; ADULTS; AQUATIC				
Seel, D.C.; Thomson, A.G. 1984 Environmental Pollution (Series A) 36:367-374				

Heron, grey
ARDEA CINEREA

Tissue	Cases Exposure Route	Range	Mean	General Information
4150 Bone	11 Ingestion	Not given	[illegible]60.0 ug/g Geometric mean	Measured in femur, dead birds collected 1976-1982. Aquatic habitat. United Kingdom
BIRDS; BONES; FLUORIDE; ENVIRONMENTAL EXPOSURE; TERRESTRIAL; UNITED KINGDOM; ADULTS; AQUATIC				
Seel, D.C.; Thomson, A.G. 1984 Environmental Pollution (Series A) 36:367-374				

Fluoride
16984-48-8
F
AtW 18.9984
Kestrel
FALCO TINNUNCULUS

Tissue	Cases Exposure Route	Range	Mean	General Information
4151 Bone	25 Ingestion	Not given	1568.0 ug/g Geometric mean	Measured in femur, dead birds collected 1976-1982. Diurnal raptor. United Kingdom
BIRDS; BONES; FLUORIDE; ENVIRONMENTAL EXPOSURE; TERRESTRIAL; UNITED KINGDOM; ADULTS; AQUATIC				
Seel, D.C.; Thomson, A.G. 1984 Environmental Pollution (Series A) 36:367-374				

Tissue	Cases Exposure Route	Range	Mean	General Information
4152 Bone	29 Ingestion	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given g) Not given h) Not given i) Not given j) Not given	a) 524 +or- 211 ppm b) 889 +or- 534 ppm c) 2127 +or- 5 ppm d) 515 +or- 134 ppm e) 549 +or- 222 ppm f) 896 +or- 22 ppm g) 302 +or- 117 ppm h) 1494 +or- 29 ppm i) 430 +or- 120 ppm j) 842 +or- 9 ppm	a) Controls, females, femur b) 10 ppm NaF, females, femur c) 500 ppm, females, femur d) Controls, males, femur e) 10 ppm, males, femur f) 500 ppm, males, femur g) Controls, females, humerus h) 500 ppm, females, humerus i) Controls, males, humerus j) 500 ppm, males, humerus Captive birds up to 2 yr old Higher fertility and thicker shells in dosed birds. Birds receiving 500 ppm died after 6 days
BIRDS; BONES; CANADA; FLUORIDE; BIOACCUMULATION; DIETS; ADULTS				
Bird, D.M.; Massari, C. 1983 Environmental Pollution (Series A) 31:67-76				

Kingfisher
ALCEDO ATTHIS

Tissue	Cases Exposure Route	Range	Mean	General Information
4153 Bone	11 Ingestion	Not given	178.4 ug/g Geometric mean	Measured in femur, dead birds collected 1976-1982. Aquatic habitat. United Kingdom
BIRDS; BONES; FLUORIDE; ENVIRONMENTAL EXPOSURE; TERRESTRIAL; UNITED KINGDOM; ADULTS; AQUATIC				
Seel, D.C.; Thomson, A.G. 1984 Environmental Pollution (Series A) 36:367-374				

Fluoride
16984-48-8
F
AtW 18.9984

Merlin
FALCO COLUMBARIUS

Tissue	Cases Exposure Route	Range	Mean	General Information
4154 Bone	3 Ingestion	Not given	2698.0 ug/g Geometric mean	Measured in femur, dead birds collected 1976-1982. Diurnal raptor. United Kingdom
BIRDS; BONES; FLUORIDE; ENVIRONMENTAL EXPOSURE; TERRESTRIAL; UNITED KINGDOM; ADULTS; AQUATIC				
Seel, D.C.; Thomson, A.G. 1984 Environmental Pollution (Series A) 36:367-374				

Owl, barn
TYTO ALBA

Tissue	Cases Exposure Route	Range	Mean	General Information
4155 Bone	99 Ingestion	Not given	112.7 ug/g Geometric mean	Measured in femur, dead birds collected 1976-1982. Partially nocturnal raptor. United Kingdom
BIRDS; BONES; FLUORIDE; ENVIRONMENTAL EXPOSURE; TERRESTRIAL; UNITED KINGDOM; ADULTS; AQUATIC				
Seel, D.C.; Thomson, A.G. 1984 Environmental Pollution (Series A) 36:367-374				

Owl, little
ATHENE NOCTUA

Tissue	Cases Exposure Route	Range	Mean	General Information
4156 Bone	12 Ingestion	Not given	595.3 ug/g Geometric mean	Measured in femur, dead birds collected 1976-1982. Partially nocturnal raptor. United Kingdom
BIRDS; BONES; FLUORIDE; ENVIRONMENTAL EXPOSURE; TERRESTRIAL; UNITED KINGDOM; ADULTS; AQUATIC				
Seel, D.C.; Thomson, A.G. 1984 Environmental Pollution (Series A) 36:367-374				

Owl, long-eared
ASIO OTUS

Tissue	Cases Exposure Route	Range	Mean	General Information
4157 Bone	9 Ingestion	Not given	366.0 ug/g Geometric mean	Measured in femur, dead birds collected 1976-1982. Partially nocturnal raptor. United Kingdom
BIRDS; BONES; FLUORIDE; ENVIRONMENTAL EXPOSURE; TERRESTRIAL; UNITED KINGDOM; ADULTS; AQUATIC				
Seel, D.C.; Thomson, A.G. 1984 Environmental Pollution (Series A) 36:367-374				

Fluoride
16984-48-8
F
AtW 18.9984
Owl, short-eared
ASIO FLAMMEUS

Tissue	Cases Exposure Route	Range	Mean	General Information
4158 Bone	11 Ingestion	Not given	198.3 ug/g Geometric mean	Measured in femur, dead birds collected 1976-1982. Partially nocturnal raptor. United Kingdom
BIRDS; BONES; FLUORIDE; ENVIRONMENTAL EXPOSURE; TERRESTRIAL; UNITED KINGDOM; ADULTS; AQUATIC				
Seel, D.C.; Thomson, A.G. 1984 Environmental Pollution (Series A) 36:367-374				

Owl, tawny
STRIX ALUCO

Tissue	Cases Exposure Route	Range	Mean	General Information
4159 Bone	43 Ingestion	Not given	531.6 ug/g Geometric mean	Measured in femur, dead birds collected 1976-1982. Partially nocturnal raptor. United Kingdom
BIRDS; BONES; FLUORIDE; ENVIRONMENTAL EXPOSURE; TERRESTRIAL; UNITED KINGDOM; ADULTS; AQUATIC				
Seel, D.C.; Thomson, A.G. 1984 Environmental Pollution (Series A) 36:367-374				

Gentamicin
1403-66-3
EXACT COMPOSITION UNKNOWN OR UNDETERMINED
MP 102-108 C
Eagle, golden
AQUILA CHRYSAETOS

Tissue	Cases Exposure Route	Range	Mean	General Information
4160 Blood, serum	3 Injection	a) 47-3 ug/ml b) 32-3 ug/ml	a) Not given b) Not given	a) IV dose b) IM dose 0.5 and 10 hr after 10 mg/kg. Healthy birds confined for wing injury, 2.78-4.42 kg. Estimated from graph. RIA
BIRDS; BLOOD SERUM; DELIBERATE EXPOSURE; DRUGS; ANTIBIOTICS; TERRESTRIAL				
Bird, J.E.; Miller, K.W.; Larson, A.A.; Duke, G.E. 1983 American Journal of Veterinary Research 44(7):1245-1247				

Gentamicin
1403-66-3
EXACT COMPOSITION UNKNOWN OR UNDETERMINED
MP 102-108 C
Hawk, red-tailed
BUTEO JAMAICENSIS

Tissue	Cases Exposure Route	Range	Mean	General Information
4161 Blood, serum	5 Injection	a) 34-1 ug/ml b) 35-1 ug/ml	a) Not given b) Not given	a) IV dose b) IM dose 0.5 and 8 hr after 10 mg/kg. Healthy birds confined for wing injury, 0.94-1.71 kg. Estimated from graph. RIA
BIRDS; BLOOD SERUM; DELIBERATE EXPOSURE; DRUGS; ANTIBIOTICS; TERRESTRIAL				
Bird, J.E.; Miller, K.W.; Larson, A.A.; Duke, G.E. 1983 American Journal of Veterinary Research 44(7):1245-1247				

Owl, great horned
BUBO VIRGINIANUS

Tissue	Cases Exposure Route	Range	Mean	General Information
4162 Blood, serum	5 Injection	a) 39-2 ug/ml b) 35-2 ug/ml	a) Not given b) Not given	a) IV dose b) IM dose 0.5 and 10 hr after 10 mg/kg. Healthy birds confined for wing injury, 1.09-2.02 kg. Estimated from graph. RIA
BIRDS; BLOOD SERUM; DELIBERATE EXPOSURE; DRUGS; ANTIBIOTICS; TERRESTRIAL				
Bird, J.E.; Miller, K.W.; Larson, A.A.; Duke, G.E. 1983 American Journal of Veterinary Research 44(7):1245-1247				

Sheep
OVIS sp.

Tissue	Cases Exposure Route	Range	Mean	General Information
4163 Blood, serum	6 Injection	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given g) Not given h) Not given	a) 34.09+/-5.56 ug/ml b) 17.05+/-1.19 ug/ml c) 13.66+/-1.11 ug/ml d) 1.36+/-0.43 ug/ml e) 34.62+/-5.62 ug/ml f) 19.98+/-1.93 ug/ml g) 15.51+/-1.46 ug/ml h) 2.25+/-0.75 ug/ml	a) 2 min after 3 mg/kg IV b) 15 min c) 40 min d) 6 hr e) 2 min after 3 mg/kg IV. After rectal temperature raised one degree with 1 ug E. coli endotoxin/kg IV f) 15 min g) 40 min h) 6 hr 62.5-85.9 kg mature ewes. Significant differences b) and f), c) and g) $p<0.05$. Agar diffusion
BLOOD SERUM; SHEEP; TERRESTRIAL; DELIBERATE EXPOSURE; DRUGS; ANTIBIOTICS				
Wilson, R.C.; Goetsch, D.D.; Huber, T.L. 1984 American Journal of Veterinary Research 45(12):2495-2497				

Heptadecane
629-78-7
C17-H36
MW 240.48, MP 22 C, BP 301.8 C, VP 1 mm Hg at 115 C

Turtle, sea
CHELONIA MYDAS

Tissue	Cases Exposure Route	Range	Mean	General Information
4164 Liver	2	Not given	0.10 ug/g	Found dead after oilspill 6/79. Evidence of prolonged exposure to external oil Wt 1,025 and 990 g Mexico, Bay of Campeche, Laguna Madre General body condition poor GC-MS
MEXICO; LIVER; TURTLES; AQUATIC; HYDROCARBONS; BIOACCUMULATION; WATER POLLUTION; ENVIRONMENTAL EXPOSURE				
Hall, R.J.; Belisle, A.A.; Sileo, L. 1983 Journal of Wildlife Diseases 19(2):106-109				

Hexachlorocyclohexane, total (No postings in CHEMLINE).

Bass, Japan sea
LATEOLABRAX JAPONICUS

Tissue	Cases Exposure Route	Range	Mean	General Information
4165 Body	1	Not applicable	6 ppb Wet wt	Collected offshore 10/81. 20 g edible tissue analyzed. Alpha, beta, gamma forms included, not detected <1.0 ppb. Japan, Osaka GC/MS
BODY; AQUATIC; ENVIRONMENTAL EXPOSURE; JAPAN; BROMINATED HYDROCARBONS; BROMINE ORGANIC COMPOUNDS; CHLORINATED HYDROCARBONS; CHLORINE ORGANIC COMPOUNDS; DDD; DDE; DDT; HEXACHLOROCYCLOHEXANE; PESTICIDES; POLYCHLORINATED BIPHENYLS; BIOACCUMULATION; FISHES; PESTICIDE RESIDUES; WATER POLLUTION				
Watanabe, I.; Kashimoto, T.; Tatsukawa, R. 1983 Archives of Environmental Contamination and Toxicology 12:615-620				

Dolphin, striped
STENELLA COERULEOALBA

Tissue	Cases Exposure Route	Range	Mean	General Information
4166 Adipose	4 Ingestion	48-89 ug/kg	77 ug/kg	Seawater levels 0.52-8.2 ng/l (mean 2.1 ng/l). Bioconcentration factor 37. Pacific Ocean GC-EC
BODY; BLUBBER; ENVIRONMENTAL EXPOSURE; FISHES; PACIFIC OCEAN; DDT; DDE; DDD; POLYCHLORINATED BIPHENYLS; HEXACHLOROCYCLOHEXANE; ANIMAL POPULATIONS; BIOACCUMULATION; WATER POLLUTION; ADIPOSE TISSUE				
Tanabe, S.; Tanaka, H.; Tatsukawa, R. 1984 Archives of Environmental Contamination and Toxicology 13:731-738				

Hexachlorocyclohexane, total (No postings in CHEMLINE).

Goby
ACANTHOGOBIUS FLAVIMANUS

Tissue	Cases Exposure Route	Range	Mean	General Information
4167 Body	a) 1 b) 1 c) 1 d) 1	a) Not applicable b) Not applicable c) Not applicable d) Not applicable	a) 1 ppb b) 1 ppb c) 6 ppb d) 4 ppb Wet wt	a) Hiroshima b) Aichi c) Fukuoka d) Tottori Collected offshore 10/81. 20 g edible tissue analyzed. Alpha, beta, gamma forms included, not detected <1.0 ppb. Japan GC/MS

BODY; AQUATIC; ENVIRONMENTAL EXPOSURE; JAPAN; BROMINATED HYDROCARBONS; BROMINE ORGANIC COMPOUNDS; CHLORINATED HYDROCARBONS; CHLORINE ORGANIC COMPOUNDS; DDD; DDE; DDT; HEXACHLOROCYCLOHEXANE; PESTICIDES; POLYCHLORINATED BIPHENYLS; BIOACCUMULATION; FISHES; PESTICIDE RESIDUES; WATER POLLUTION

Watanabe, I.; Kashimoto, T.; Tatsukawa, R. 1983 Archives of Environmental Contamination and Toxicology 12:615-620

Hairtail
TRICHIURUS LEPTURUS

Tissue	Cases Exposure Route	Range	Mean	General Information
4168 Body	1	Not applicable	8 ppb Wet wt	Purchased at market 7/82. 20 g edible tissue analyzed. Alpha, beta, gamma forms included, not detected <1.0 ppb. Japan, Shikoku GC/MS

BODY; AQUATIC; ENVIRONMENTAL EXPOSURE; JAPAN; BROMINATED HYDROCARBONS; BROMINE ORGANIC COMPOUNDS; CHLORINATED HYDROCARBONS; CHLORINE ORGANIC COMPOUNDS; DDD; DDE; DDT; HEXACHLOROCYCLOHEXANE; PESTICIDES; POLYCHLORINATED BIPHENYLS; BIOACCUMULATION; FISHES; PESTICIDE RESIDUES; WATER POLLUTION

Watanabe, I.; Kashimoto, T.; Tatsukawa, R. 1983 Archives of Environmental Contamination and Toxicology 12:615-620

Mackerel
PNEUMATOPHORUS JAPONICUS

Tissue	Cases Exposure Route	Range	Mean	General Information
4169 Body	1	Not applicable	2 ppb Wet wt	Purchased at market 7/82. 20 g edible tissue analyzed. Alpha, beta, gamma forms included, not detected <1.0 ppb. Japan, Shizuoka GC/MS

BODY; AQUATIC; ENVIRONMENTAL EXPOSURE; JAPAN; BROMINATED HYDROCARBONS; BROMINE ORGANIC COMPOUNDS; CHLORINATED HYDROCARBONS; CHLORINE ORGANIC COMPOUNDS; DDD; DDE; DDT; HEXACHLOROCYCLOHEXANE; PESTICIDES; POLYCHLORINATED BIPHENYLS; BIOACCUMULATION; FISHES; PESTICIDE RESIDUES; WATER POLLUTION

Watanabe, I.; Kashimoto, T.; Tatsukawa, R. 1983 Archives of Environmental Contamination and Toxicology 12:615-620

Hexachlorocyclohexane, total (No postings in CHEMLINE).

Mackerel, horse
TRACHURUS JAPONICUS

Tissue	Cases Exposure Route	Range	Mean	General Information
4170 Body	1	Not applicable	4 ppb Wet wt	Purchased at market 7/82. 20 g edible tissue analyzed. Alpha, beta, gamma forms included, not detected <1.0 ppb. Japan, Wakayama GC/MS
BODY; AQUATIC; ENVIRONMENTAL EXPOSURE; JAPAN; BROMINATED HYDROCARBONS; BROMINE ORGANIC COMPOUNDS; CHLORINATED HYDROCARBONS; CHLORINE ORGANIC COMPOUNDS; DDD; DDE; DDT; HEXACHLOROCYCLOHEXANE; PESTICIDES; POLYCHLORINATED BIPHENYLS; BIOACCUMULATION; FISHES; PESTICIDE RESIDUES; WATER POLLUTION Watanabe, I.; Kashimoto, T.; Tatsukawa, R. 1983 Archives of Environmental Contamination and Toxicology 12:615-620				

Mullet
MUGIL CEPHALUS

Tissue	Cases Exposure Route	Range	Mean	General Information
4171 Body	a) 1 b) 1 c) 1 d) 1	a) Not applicable b) Not applicable c) Not applicable d) Not applicable	a) 5 ppb b) 46 ppb c) 6 ppb d) 10 ppb Wet wt	a) Osaka b) Tottori c) Ekime d) Kagawa Collected offshore 10/81. 20 g edible tissue analyzed. Alpha, beta, gamma forms included, not detected <1.0 ppb. Japan GC/MS
BODY; AQUATIC; ENVIRONMENTAL EXPOSURE; JAPAN; BROMINATED HYDROCARBONS; BROMINE ORGANIC COMPOUNDS; CHLORINATED HYDROCARBONS; CHLORINE ORGANIC COMPOUNDS; DDD; DDE; DDT; HEXACHLOROCYCLOHEXANE; PESTICIDES; POLYCHLORINATED BIPHENYLS; BIOACCUMULATION; FISHES; PESTICIDE RESIDUES; WATER POLLUTION Watanabe, I.; Kashimoto, T.; Tatsukawa, R. 1983 Archives of Environmental Contamination and Toxicology 12:615-620				

Mussel
MYTILUS EDULIS

Tissue	Cases Exposure Route	Range	Mean	General Information
4172 Body	a) 1 b) 1 c) 1 d) 1	a) Not applicable b) Not applicable c) Not applicable d) Not applicable	a) 14 ppb b) 3 ppb c) 4 d) 4 Wet wt	a) Osaka b) Wakayama c) Ekime d) Oita Collected offshore 10/81. 20 g edible tissue analyzed. Alpha, beta, gamma forms included, not detected <1.0 ppb. Japan GC/MS
BODY; AQUATIC; ENVIRONMENTAL EXPOSURE; JAPAN; BROMINATED HYDROCARBONS; BROMINE ORGANIC COMPOUNDS; CHLORINATED HYDROCARBONS; CHLORINE ORGANIC COMPOUNDS; DDD; DDE; DDT; HEXACHLOROCYCLOHEXANE; PESTICIDES; POLYCHLORINATED BIPHENYLS; BIOACCUMULATION; FISHES; PESTICIDE RESIDUES; WATER POLLUTION Watanabe, I.; Kashimoto, T.; Tatsukawa, R. 1983 Archives of Environmental Contamination and Toxicology 12:615-620				

Hexachlorocyclohexane, total (No postings in CHEMLINE).

Myctophid
DIAPHUS SUBORBITALIS

Tissue	Cases Exposure Route	Range	Mean	General Information
4173 Body	Ingestion	Not given	2.2 ug/kg	Seawater levels 0.52-8.2 ng/l (mean 2.1 ng/l). Bioconcentration factor 1.0. Pacific Ocean GC-EC

BODY; BLUBBER; ENVIRONMENTAL EXPOSURE; FISHES; PACIFIC OCEAN; DDT; DDE; DDD; POLYCHLORINATED BIPHENYLS; HEXACHLOROCYCLOHEXANE; ANIMAL POPULATIONS; BIOACCUMULATION; WATER POLLUTION; ADIPOSE TISSUE
Tanabe, S.; Tanaka, H.; Tatsukawa, R. 1984 Archives of Environmental Contamination and Toxicology 13:731-738

Sardine
SARDINOPS MELANOSTICTA

Tissue	Cases Exposure Route	Range	Mean	General Information
4174 Body	a) 2 b) 1	a) 14-22 ppb wet wt b) Not applicable	a) 18 ppb b) 11 ppb Wet wt	a) Wakayama b) Chiba Purchased at market 7/82. 20 g edible tissue analyzed. Alpha, beta, gamma forms included, not detected <1.0 ppb. Japan GC/MS

BODY; AQUATIC; ENVIRONMENTAL EXPOSURE; JAPAN; BROMINATED HYDROCARBONS; BROMINE ORGANIC COMPOUNDS; CHLORINATED HYDROCARBONS; CHLORINE ORGANIC COMPOUNDS; DDD; DDE; DDT; HEXACHLOROCYCLOHEXANE; PESTICIDES; POLYCHLORINATED BIPHENYLS; BIOACCUMULATION; FISHES; PESTICIDE RESIDUES; WATER POLLUTION
Watanabe, I.; Kashimoto, T.; Tatsukawa, R. 1983 Archives of Environmental Contamination and Toxicology 12:615-620

Saury, Pacific
COLOLABIS SAIRA

Tissue	Cases Exposure Route	Range	Mean	General Information
4175 Body	1	Not applicable	33 ppb Wet wt	Purchased at market 7/82. 20 g edible tissue analyzed. Alpha, beta, gamma forms included, not detected <1.0 ppb. Japan, Iwate GC/MS

BODY; AQUATIC; ENVIRONMENTAL EXPOSURE; JAPAN; BROMINATED HYDROCARBONS; BROMINE ORGANIC COMPOUNDS; CHLORINATED HYDROCARBONS; CHLORINE ORGANIC COMPOUNDS; DDD; DDE; DDT; HEXACHLOROCYCLOHEXANE; PESTICIDES; POLYCHLORINATED BIPHENYLS; BIOACCUMULATION; FISHES; PESTICIDE RESIDUES; WATER POLLUTION
Watanabe, I.; Kashimoto, T.; Tatsukawa, R. 1983 Archives of Environmental Contamination and Toxicology 12:615-620

Hexachlorocyclohexane, total (No postings in CHEMLINE).

Scorpionfish
SEBASTES INERMIS

Tissue	Cases Exposure Route	Range	Mean	General Information
4176 Body	1	Not applicable	2 ppb Wet wt	Purchased at market 7/82. 20 g edible tissue analyzed. Alpha, beta, gamma forms included, not detected <1.0 ppb. Japan, Aomori GC/MS

BODY; AQUATIC; ENVIRONMENTAL EXPOSURE; JAPAN; BROMINATED HYDROCARBONS; BROMINE ORGANIC COMPOUNDS; CHLORINATED HYDROCARBONS; CHLORINE ORGANIC COMPOUNDS; DDD; DDE; DDT; HEXACHLOROCYCLOHEXANE; PESTICIDES; POLYCHLORINATED BIPHENYLS; BIOACCUMULATION; FISHES; PESTICIDE RESIDUES; WATER POLLUTION

Watanabe, I.; Kashimoto, T.; Tatsukawa, R. 1983 Archives of Environmental Contamination and Toxicology 12:615-620

Squid
TODARODES PACIFICUS

Tissue	Cases Exposure Route	Range	Mean	General Information
4177 Body	5 Ingestion	0.93-1.5 ug/kg	1.1 ug/kg	Seawater levels 0.52-8.2 ng/l (mean 2.1 ng/l). Bioconcentration factor 0.52. Pacific Ocean GC-EC

BODY; BLUBBER; ENVIRONMENTAL EXPOSURE; FISHES; PACIFIC OCEAN; DDT; DDE; DDD; POLYCHLORINATED BIPHENYLS; HEXACHLOROCYCLOHEXANE; ANIMAL POPULATIONS; BIOACCUMULATION; WATER POLLUTION; ADIPOSE TISSUE

Tanabe, S.; Tanaka, H.; Tatsukawa, R. 1984 Archives of Environmental Contamination and Toxicology 13:731-738

Tissue	Cases Exposure Route	Range	Mean	General Information
4178 Body	1	Not applicable	3 ppb Wet wt	Purchased at market 7/82. 20 g edible tissue analyzed. Alpha, beta, gamma forms included, not detected <1.0 ppb. Japan, Sanin GC/MS

BODY; AQUATIC; ENVIRONMENTAL EXPOSURE; JAPAN; BROMINATED HYDROCARBONS; BROMINE ORGANIC COMPOUNDS; CHLORINATED HYDROCARBONS; CHLORINE ORGANIC COMPOUNDS; DDD; DDE; DDT; HEXACHLOROCYCLOHEXANE; PESTICIDES; POLYCHLORINATED BIPHENYLS; BIOACCUMULATION; FISHES; PESTICIDE RESIDUES; WATER POLLUTION

Watanabe, I.; Kashimoto, T.; Tatsukawa, R. 1983 Archives of Environmental Contamination and Toxicology 12:615-620

Zooplankton

Tissue	Cases Exposure Route	Range	Mean	General Information
4179 Body	Ingestion	Not given	0.26 ug/kg	Mainly copepods. Seawater levels 0.52-8.2 ng/l (mean 2.1 ng/l). Bioconcentration factor 0.12. Pacific Ocean GC-EC

BODY; BLUBBER; ENVIRONMENTAL EXPOSURE; FISHES; PACIFIC OCEAN; DDT; DDE; DDD; POLYCHLORINATED BIPHENYLS; HEXACHLOROCYCLOHEXANE; ANIMAL POPULATIONS; BIOACCUMULATION; WATER POLLUTION; ADIPOSE TISSUE

Tanabe, S.; Tanaka, H.; Tatsukawa, R. 1984 Archives of Environmental Contamination and Toxicology 13:731-738

Hexadecane

544-76-3
C16-H34
MW 226.45, MP 18.17 C, BP 287 C, VP 1 mm Hg at 105.3 C
Turtle, sea
CHELONIA MYDAS

Tissue	Cases Exposure Route	Range	Mean	General Information
4180 Liver	2	Not given	0.08 ug/g	Found dead after oilspill 6/79. Evidence of prolonged exposure to external oil Wt 1,025 and 990 g Mexico, Bay of Campeche, Laguna Madre General body condition poor GC-MS

MEXICO; LIVER; TURTLES; AQUATIC; HYDROCARBONS; BIOACCUMULATION; WATER POLLUTION; ENVIRONMENTAL EXPOSURE
Hall, R.J.; Belisle, A.A.; Sileo, L. 1983 Journal of Wildlife Diseases 19(2):106-109

Hexadecane, 2,6,10,14-tetramethyl-

638-36-8
C20-H42
MW 282.62
Turtle, sea
CHELONIA MYDAS

Tissue	Cases Exposure Route	Range	Mean	General Information
4181 Liver	2	Not given	0.02 ug/g	Found dead after oilspill 6/79. Evidence of prolonged exposure to external oil Wt 1,025 and 990 g Mexico, Bay of Campeche, Laguna Madre General body condition poor GC-MS

MEXICO; LIVER; TURTLES; AQUATIC; HYDROCARBONS; BIOACCUMULATION; WATER POLLUTION; ENVIRONMENTAL EXPOSURE
Hall, R.J.; Belisle, A.A.; Sileo, L. 1983 Journal of Wildlife Diseases 19(2):106-109

Hydroxybiphenyl (No postings in CHEMLINE).

Sole, English
PAROPHRYS VETULUS

Tissue	Cases Exposure Route	Range	Mean	General Information
4182 Bile	2	140-1400 ng/g Wet wt	770 ng/g Wet wt	Levels significantly higher than in fish from unpolluted Meadow Point area. Washington, Duwamish Waterway GC/MS

BILE; AQUATIC; FISHES; ENVIRONMENTAL EXPOSURE; WASHINGTON; LIVER DISEASES; NEOPLASMS; MEASUREMENT METHODS; BIPHENYL COMPOUNDS; POLYCYCLIC AROMATIC HYDROCARBONS; BIOACCUMULATION; METABOLITES; URBAN AREAS; WATER POLLUTION
Krahn, M.M.; Myers, M.S.; Burrows, D.G.; Malins, D.C. 1984 Xenobiotica 14:633-646

Hydroxyfluorene (No postings in CHEMLINE).
Sole, English
PAROPHRYS VETULUS

Tissue	Cases Exposure Route	Range	Mean	General Information
4183 Bile	2	500-3500 ng/g Wet wt	2000 ng/g Wet wt	Levels significantly higher than in fish from unpolluted Meadow Point area. Washington, Duwamish Waterway GC/MS
BILE; AQUATIC; FISHES; ENVIRONMENTAL EXPOSURE; WASHINGTON; LIVER DISEASES; NEOPLASMS; MEASUREMENT METHODS; BIPHENYL COMPOUNDS; POLYCYCLIC AROMATIC HYDROCARBONS; BIOACCUMULATION; METABOLITES; URBAN AREAS; WATER POLLUTION				
Krahn, M.M.; Myers, M.S.; Burrows, D.G.; Malins, D.C. 1984 Xenobiotica 14:633-646				

Imidazo(2,1-b)thiazole, 2,3,5,6-tetrahydro-6-phenyl, (S)-
14769-73-4
C11-H12-N2-S
MW 204.31, MP 87-89 C

Cattle
BOS sp.

Tissue	Cases Exposure Route	Range	Mean	General Information
4184 Blood, serum	a) 5 b) 5 c) 5 Injection Dermal	a) 2.05+/-1.09-0.40+/-0.30 ppm b) 0.07+/-0.08-0.34+/-0.19 ppm c) 0.09+/-0.06-0.61+/-0.05 ppm	a) Not applicable b) Not applicable c) Not applicable	a) 1-7 hr, peak (2.05+/-1.09 ppm) 1 hr after 6 mg/kg IV b) 1-7 hr, peak (0.39+/-0.14 ppm) 5 hr after 20 mg/kg dermal on individuals with clipped winter coats c) 1-7 hr, peak, (0.61+/-0.05 ppm) 7 hr after 20 mg/kg dermal on individuals with normal winter coats Hair length does not affect absorption. Australia HPLC
BLOOD SERUM; CATTLE; TERRESTRIAL; AUSTRALIA; DELIBERATE EXPOSURE; JUVENILES; BIOACCUMULATION				
Forsyth, B.A. 1984 Australian Veterinary Journal 61(7):241-242				

Swine
SUS sp.

Tissue	Cases Exposure Route	Range	Mean	General Information
4185 Bile	4 Ingestion Injection	a) Not applicable b) Not applicable c) Not applicable d) Not applicable	a) 4.1% b) 4.3% c) 0.6% d) 0.4%	a) Parent & metabolites, oral dose b) Parent & metabolites, IM c) Parent, IM d) Parent, oral % dose in 72 hr. Estimated from graph. France HPLC; Scintillation counting

(next page)

Imidazo(2,1-b)thiazole, 2,3,5,6-tetrahydro-6-phenyl, (S)-

14769-73-4
C11-H12-N2-S
MW 204.31, MP 87-89 C

Swine
SUS sp.

(continued)

Tissue	Cases Exposure Route	Range	Mean	General Information
4186 Blood, plasma	8 Ingestion Injection	a) 2.5-0.15 ug/ml b) 1.0-0.25 ug/ml c) 0.8-0.20 ug/ml d) 67.7-81.6% e) 84.6-28.7%	a) Not applicable b) Not applicable c) Not applicable d) Not applicable e) Not applicable	a) 0.08-24 hr, peak (2.5 ug/ml) immediately after 5 mg/kg IV b) 0.08-24 hr, peak (1.82+/-0.28 ug/ml) 1 hr after 7.5 mg/kg IM c) 0.08-24 hr, peak (1.34+/-0.32 ug/ml) 1.33 hr after 10 mg/kg oral d) 0.5-24 hr, % radioactivity in parent form after 10 mg/kg oral e) 0.5-24 hr, % radioactivity in parent form after 7.5 mg/kg IM a) -c) estimated from graph. Ranges of means. France HPLC; Scintillation counting
4187 Urine	8 Ingestion Injection	a) Not applicable b) Not applicable c) Not applicable d) Not applicable	a) 60% b) 65% c) 25% d) 19%	a) Parent & metabolites, oral dose b) Parent & metabolites, IM c) Parent, IM d) Parent, oral % dose in 72 hr. Estimated from graph. France HPLC; Scintillation counting
BLOOD PLASMA; URINE; BILE; SWINE; DELIBERATE EXPOSURE; ADULTS; FRANCE; GASTROINTESTINAL DISEASES; ANTIHELMINTICS; DRUGS; DRUG THERAPY; SURGERY; BIOACCUMULATION; RADIONUCLIDES; TERRESTRIAL				
Galtier, P.; Escoula, L.; Alvinerie, M. 1983 American Journal of Veterinary Research 44(4):583-587				

Iodine

7553-56-2
I
AtW 126.9045, MP 113.60 C, BP 185.24 C, VP (solid) 0.03 mm Hg at 0 C, 0.305 mm Hg at 25 C, 2.154 mm Hg at 50 C, 26.78 mm Hg at 90 C

Cattle
BOS sp.

Tissue	Cases Exposure Route	Range	Mean	General Information
4188 Blood, serum	a) 20 b) 22 c) 2 d) 13 e) 7 f) 7 g) 12 Ingestion	a) 21.0-34.5 ug/dl b) 38.0-73.0 ug/dl c) 79.0-111.0 ug/dl d) 32.0-121.0 ug/dl e) 17.0-55.0 ug/dl f) 43.0-96.0 ug/dl g) 5.7-19.5 ug/dl	a) 28.5 ug/dl b) 59.2 ug/dl c) Not given d) 65.4 ug/dl e) 26.8 ug/dl f) 69.2 ug/dl g) 10.6 ug/dl	a) 440 mg/d, Holstein herd A b) 300-600 mg/d, Holstein herd B c) 600 mg/d, Brown Swiss herd C d) 300-600 mg/d, Holstein herd D e) >68 mg/d, Holstein herd E f) 250-500 mg/d g) 12 mg/d, Holstein controls Mean intakes as ethylene dihydroiodide in dairy rations for 1 mo-7 yr. Referred for disease problems to U of Minnesota, College of Veterinary Medicine. University herd as controls. Milk loss, respiratory disease, increased calving interval, hock lesions

(next page)

Iodine

7553-56-2

I

AtW 126.9045, MP 113.60 C, BP 185.24 C, VP (solid) 0.03 mm Hg at 0 C, 0.305 mm Hg at 25 C, 2.154 mm Hg at 50 C, 26.78 mm Hg at 90 C

Cattle
BOS sp.

(continued)

Tissue	Cases Exposure Route	Range	Mean	General Information
4189 Milk	a) 3 b) 4 c) 2 d) 2 Ingestion	a) 45.0-113.0 ug/dl b) 19.0-67.0 ug/dl c) 125 ug/dl d) 6.1-15.9 ug/dl	a) 88.0 ug/dl b) 42.5 ug/dl c) 125 ug/dl d) 9.2 ug/dl	a) 300-600 mg/d, Holstein herd D b) >68 mg/d, Holstein herd E c) 250-500 mg/d, Holstein herd F d) 12 mg/d, Holstein controls Mean intakes as ethylene dihydroiodide in dairy rations for 1-3 yr. Referred for disease problems to U Minnesota, College of Veterinary Medicine. University herd as controls. Milk loss, respiratory disease, increased calving interval, hock lesions

BLOOD SERUM; MILK; TERRESTRIAL; DELIBERATE EXPOSURE; RESPIRATORY DISEASES; DRUGS; IODINE; LACTATION; ANIMAL FEEDS; FOOD ADDITIVES; CATTLE

Olson, W.G.; Stevens, J.B.; Anderson, J.; Haggard, D.W. 1984 Journal of the American Veterinary Medicine Association 184(2):179-181

Sheep
OVIS sp.

Tissue	Cases Exposure Route	Range	Mean	General Information
4190 Milk	a) 5 b) 5 c) 5 d) 5 e) 5 f) 5 g) 5 h) 5 Ingestion	a) 400-150 ug/l b) Not given c) Not given d) Not given e) Not given f) 0-50 ug/l g) 0-180 ug/l h) 0-500 ug/l	a) Not applicable b) 190+/-12 ug/l c) 193+/-11 ug/l d) 170+/-7 ug/l e) 178+/-6 ug/l f) Not applicable g) Not applicable h) Not applicable	a) 4/81-5/83, peak (1800 ug/l) 3/82, trough (100 ug/l) 9/82. Estimated from graph b) Controls c) 24 hr after 400 ug as KI solution d) Controls e) 24 hr after 1600 ug/ as KI solution f) 0-450 min, peak (50 ug/l) 300 min after 200 ug as KI solution g) 0-450 min, peak (200 ug/l) 300 min after 1000 ug as KI solution h) 0-450 min, peak (700 ug/l) 300 min after 2000 ug as KI solution. Australia Colorimetric

MILK; SHEEP; TERRESTRIAL; ENVIRONMENTAL EXPOSURE; DELIBERATE EXPOSURE; AUSTRALIA; ADULTS; IODINE; BIOACCUMULATION

Azuolas, J.K.; Caple, I.W. 1984 Australian Veterinary Journal 61(7):223-227

Tissue	Cases Exposure Route	Range	Mean	General Information
4191 Thyroid gland	31 Ingestion	0.11-1.24 pCi/g	Not given	Raised, slaughtered NCAR Birmingham England. New measurement method. United Kingdom NaI detector

THYROID GLANDS; SHEEP; ENVIRONMENTAL EXPOSURE; UNITED KINGDOM; MEASUREMENT METHODS; IODINE; RADIOISOTOPES; BIOACCUMULATION; TERRESTRIAL

Middlesworth, L.V. 1984 Health Physics 47(3):488-490

Iodine, isotope of mass 135
14158-31-7
I
Swan, mute
CYGNUS OLOR

Tissue	Cases Exposure Route	Range	Mean	General Information
4192 Thyroid gland	40 Ingestion	10-5091 mBq/g Fresh wt	765 mBq/g Fresh wt	Dead swans from 50 mi above to 55 mi below Nottingham water treatment works, 2/79 to 11/83. High downstream levels in sewage, treatment effluents, contaminated food (algae). England, East Midlands, River Trent NaI crystal detector
THYROID GLANDS; AQUATIC; WATERFOWL; ENVIRONMENTAL EXPOSURE; UNITED KINGDOM; IODINE; BIOACCUMULATION; FOOD CONTAMINATION; SEWAGE; WATER POLLUTION; RADIONUCLIDES				
Howe, J.R.; Hunt, A.E. 1984 Science of the Total Environment 35:387-401				

Iodine, isotope of mass 129
15046-84-1
I
Waterfowl

Tissue	Cases Exposure Route	Range	Mean	General Information
4193 Muscle	a) 7 b) 4 c) 15 d) 11	a) 4.6X10(E-7)-3.1X10(E-6) b) 2.8X10(E-7)-4.6X10(E-6) c) 1.5X10(E-7)-3.8X10(E-6) d) 3.0X10(E-6)-1.1X10(E-5)	a) 1.3X10(E-6)+/- 9.9X10(E-7) b) 1.6X10(E-6)+/- 2.0X10(E-6) c) 1.6X10(E-6)+/- 1.4X10(E-6) d) 6.0X10(E-6)+/- 2.1X10(E-6)	a) Controls, collected 40-60 km from leaching ponds b) Wild waterfowl from nonradioactive sewage lagoon 100 m from leaching ponds c) Wild waterfowl from radioactive leaching ponds, collected 1975-81 d) Wing-clipped mallards placed on leaching ponds 2-156 d Iodine-129/127 atom ratios Significantly higher ($p < 0.05$) in d). Idaho, Idaho National Engineering Laboratory, Test Reactor Area Activation analysis
DUCKS; WATERFOWL; AQUATIC; TERRESTRIAL; ENVIRONMENTAL EXPOSURE; DELIBERATE EXPOSURE; RADIOISOTOPES; IODINE				
Halford, D.K.; Markham, O.D. 1984 Health Physics 46(6):1259-1263				

Iodine, isotope of mass 131
10043-66-0
I
Swan, mute
CYGNUS OLOR

Tissue	Cases Exposure Route	Range	Mean	General Information
4194 Thyroid gland	9 Ingestion	340-5365 mBq/g Fresh wt	1548 mBq/g Fresh wt	Dead swans from 50 mi above to 55 mi below Nottingham water treatment works, 2/79 to 11/83. High downstream levels in sewage, treatment effluents, contaminated food (algae). England, East Midlands, River Trent NaI crystal detector
THYROID GLANDS; AQUATIC; WATERFOWL; ENVIRONMENTAL EXPOSURE; UNITED KINGDOM; IODINE; BIOACCUMULATION; FOOD CONTAMINATION; SEWAGE; WATER POLLUTION; RADIONUCLIDES				
Howe, J.R.; Hunt, A.E. 1984 Science of the Total Environment 35:387-401				

Iron

7439-89-6
Fe
AtW 55.847, MP 1535 C (pure), 1000-1300 C (cast), 1500 C (wrought), 1300 C (steel), BP 3000 C, VP 1 mm Hg at 1787 C, 10 mm Hg at 2040 C

Beaver
CASTOR CANADENSIS

Tissue	Cases Exposure Route	Range	Mean	General Information
4195 Intestine	4 Ingestion	Not given	47+/-9 ug/g	Undisturbed watershed. Specimens from fur trapper. Canada, Ontario, Georgian Bay, Tadenac Lake ES
4196 Kidney	4 Ingestion	Not given	95+/-13 ug/g	Undisturbed watershed. Specimens from fur trapper. Canada, Ontario, Georgian Bay, Tadenac Lake ES
4197 Liver	4 Ingestion	Not given	251+/-34 ug/g	Undisturbed watershed. Specimens from fur trapper. Canada, Ontario, Georgian Bay, Tadenac Lake ES
4198 Muscle	4 Ingestion	Not given	160+/-150 ug/g	Undisturbed watershed. Specimens from fur trapper. Canada, Ontario, Georgian Bay, Tadenac Lake ES

BEAVERS; OTTERS; RACCOONS; CANADA; BIOACCUMULATION; BIOMAGNIFICATION; SELENIUM; IRON; COPPER; CADMIUM; CALCIUM; ALUMINUM; MAGNESIUM; MANGANESE; SODIUM; NICKEL; PHOSPHORUS; ZINC; POTASSIUM; DETOXIFICATION; DIETS; LIVER; KIDNEYS; INTESTINES; MUSCLES; AQUATIC; TERRESTRIAL; ENVIRONMENTAL EXPOSURE; BIOLOGICAL MONITORING

Wren, C.D. 1984 Science of the Total Environment 34:177-184

Buffalo, water
BOS sp.

Tissue	Cases Exposure Route	Range	Mean	General Information
4199 Lung	Inhalation	a) Not given b) Not given	a) 32,847+/-5058 mg/kg b) 19,656+/-3047 mg/kg	a) Orissa area b) West Bengal area Polluted industrial and mining areas. Controls from non-industrial regions had no gross pulmonary changes, no data given. Necropsies on food animals. India Lungs were dirty pink color mottled with black. 20 trace metals present. Location of particulates suggested paralyzed clearance mechanisms. Aggregates of lymphocytes and dust-laden macrophages. X-ray fluorescence

CATTLE; ENVIRONMENTAL EXPOSURE; AIR POLLUTION; INDUSTRIAL POLLUTION; TERRESTRIAL; MERCURY; IRON; ZINC; LEAD; LUNGS; INDIA; AUTOPSIES; FOOD CONTAMINATION; BIOLOGICAL MONITORING; COPPER; BIOINDICATORS; DUST; INHALATION

Dogra, R.K.S.; Shanker, R.; Saxena, A.K.; Khanna, S.; Srivastava, S.N.; Shukla, L.J.; Zaidi, S.H. 1984 Environmental Pollution (Series A) 36:109-120

Iron
7439-89-6
Fe
AtW 55.847, MP 1535 C (pure), 1000-1300 C (cast), 1500 C (wrought), 1300 C (steel), BP 3000 C, VP 1 mm Hg at 1787 C, 10 mm Hg at 2040 C
Cattle
BOS sp.

Tissue	Cases Exposure Route	Range	Mean	General Information
4200 Blood	a) 3 b) 1 Injection Ingestion	a) Not given b) Not given	a) 194+/-12x10(E-4)% b) 24,500x10(E-4)% % of dose/kg	a) 102 d af-er 2.094-2.166 mCi orally b) 70 d after 0.200 mCi IV 402-533 kg Pie Noir cows. As Fe-59. 76.3% (oral) and 83.7% (IV) of body burden. Data available on other tissues.
INTESTINES; LIVER; SPLEEN; URINE; MILK; MUSCLES; BONES; FEMUR; RIBS; SKIN; KIDNEYS; BLOOD; COBALT; IRON; MANGANESE; CHROMIUM; CATTLE; TERRESTRIAL; DELIBERATE EXPOSURE; LACTATION; RADIONUCLIDES				
Van Bruwaene, R.; Gerber, G.B.; Kirchmann, R.; Colard, J.; Van Kerkom, J. 1984 Health Physics 46(5):1069-1082				

Tissue	Cases Exposure Route	Range	Mean	General Information
4201 Blood, serum	53 Injection	168.5-231.5 ug/dl	Not given	Range of means. 1-28 wk after birth. Levels among treated (1000 mg elemental Fe at 1 wk or 1 and 2 wk postparturition) not significantly different from untreated. Significant differences among means for different sampling times. Increased hemoglobin concentration, mean corpuscular volume, mean corpuscular hemoglobin and packed cell volume. Iowa
CATTLE; JUVENILES; IRON; BLOOD; BLOOD SERUM; TERRESTRIAL; DELIBERATE EXPOSURE				
Reece, W.O.; Self, H.L.; Hotchkiss, D.K. 1984 American Journal of Veterinary Research 45(10):2119-2122				

Tissue	Cases Exposure Route	Range	Mean	General Information
4202 Brain	a) 3 b) 4 c) 4 d) 3 e) 4 Ingestion	a) Not given b) Not given c) Not given d) Not given e) Not given	a) 112.5 ug/g b) 99.4 ug/g c) 101.3 ug/g d) 131.7 ug/g e) 114.4 ug/g Dry wt	a) Controls, 0 mg Pb/kg b) 6.25 mg Pb/kg c) 7.81 mg Pb/kg d) 9.77 mg Pb/kg e) 12.21 mg Pb/kg Daily dietary doses. 2 in c) survived 89 and 112 d, others, except controls, died within 24 d. Diarrhea Blindness, death AAS
LIVER; KIDNEYS; SPLEEN; HEART; BRAIN; DELIBERATE EXPOSURE; ADULTS; CATTLE; METAL POISONING; AUTOPSIES; COPPER; LEAD; MANGANESE; IRON; ZINC; METALS; AGRICULTURE; BIOACCUMULATION; DIETS; ANIMAL FEEDS; TERRESTRIAL				
Doyle, J.J.; Younger, R.L. 1984 Veterinary and Human Toxicology 26(3):201-204				

Iron
7439-89-6
Fe
AtW 55.847, MP 1535 C (pure), 1000-1300 C (cast), 1500 C (wrought), 1300 C (steel), BP 3000 C, VP 1 mm Hg at 1787 C, 10 mm Hg at 2040 C

Cattle
BOS sp.

Tissue	Cases Exposure Route	Range	Mean	General Information
4303 Hair	Ingestion	Not given	63 ppm	Data from one representative site. Deposition of elements on pasture. Collected Oct-Nov 1981-2. 5 yr old cows, 10 samples/farm, 9-14 farms, 7-12 sites. Significantly correlated with bulk deposition. Belgium NA
CATTLE; HAIR; BIOLOGICAL MONITORING; AIR POLLUTION; LAND POLLUTION; ARSENIC; BARIUM; BROMINE; CERIUM; COBALT; CHROMIUM; CESIUM; IRON; POTASSIUM; LANTHANUM; SODIUM; RUBIDIUM; ANTIMONY; SCANDIUM; SELENIUM; SAMARIUM; THORIUM; ZINC; FOOD CONTAMINATION; BIOACCUMULATION; BIOCONCENTRATION; TERRESTRIAL; ENVIRONMENTAL EXPOSURE; TRACE ELEMENTS Ronneau, C.; Cara, J. 1984 Science of the Total Environment 39:135-142				

Tissue	Cases Exposure Route	Range	Mean	General Information
4304 Heart	a) 3 b) 4 c) 4 d) 3 e) 4 Ingestion	a) Not given b) Not given c) Not given d) Not given e) Not given	a) 242.5 ug/g b) 378.8 ug/g c) 258.8 ug/g d) 318.3 ug/g e) 280.0 ug/g Dry wt	a) Controls, 0 mg Pb/kg b) 6.25 mg Pb/kg c) 7.81 mg Pb/kg d) 9.77 mg Pb/kg e) 12.21 mg Pb/kg Daily dietary doses. 2 in c) survived 89 and 112 d, others, except controls, died within 24 d. Diarrhea Blindness, death AAS
4305 Kidney	a) 3 b) 4 c) 4 d) 3 e) 4 Ingestion	a) Not given b) Not given c) Not given d) Not given e) Not given	a) 341.7 ug/g b) 375.0 ug/g c) 850.0 ug/g d) 541.7 ug/g e) 500.0 ug/g Dry wt	a) Controls, 0 mg Pb/kg b) 6.25 mg Pb/kg c) 7.81 mg Pb/kg d) 9.77 mg Pb/kg e) 12.21 mg Pb/kg Daily dietary doses. 2 in c) survived 89 and 112 d, others, except controls, died within 24 d. Diarrhea Blindness, death AAS

(next page)

Iron
7439-89-6
Fe
AtW 55.847, MP 1535 C (pure), 1000-1300 C (cast), 1500 C (wrought), 1300 C (steel), BP 3000 C, VP 1 mm Hg at 1787 C, 10 mm Hg at 2040 C

Cattle
BOS sp.

(continued)

Tissue	Cases Exposure Route	Range	Mean	General Information
4206 Liver	a) 3 b) 4 c) 4 d) 3 e) 4 Ingestion	a) Not given b) Not given c) Not given d) Not given e) Not given	a) 277.5 ug/g b) 400.6 ug/g c) 1350.0 ug/g d) 442.5 ug/g e) 522.5 ug/g Dry wt	a) Controls, 0 mg Pb/kg b) 6.25 mg Pb/kg c) 7.81 mg Pb/kg d) 9.77 mg Pb/kg e) 12.21 mg Pb/kg Daily dietary doses. 2 in c) survived 89 and 112 d, others, except controls, died within 24 d. Diarrhea Blindness, death AAS

LIVER; KIDNEYS; SPLEEN; HEART; BRAIN; DELIBERATE EXPOSURE; ADULTS; CATTLE; METAL POISONING; AUTOPSIES; COPPER; LEAD; MANGANESE; IRON; ZINC; METALS; AGRICULTURE; BIOACCUMULATION; DIETS; ANIMAL FEEDS; TERRESTRIAL

Doyle, J.J.; Younger, R.L. 1984 Veterinary and Human Toxicology 26(3):201-204

Tissue	Cases Exposure Route	Range	Mean	General Information
4207 Milk	a) 3 b) 1 Injection Ingestion	a) Not given b) Not given	a) 0.01% b) 1.1% % of dose	a) 102 d after 2.094-2.166 mCi orally b) 70 d after 0.200 mCi IV 402-533 kg Pie Noir cows. Ac Fe-59. Data available on other tissues.

INTESTINES; LIVER; SPLEEN; URINE; MILK; MUSCLES; BONES; FEMUR; RIBS; SKIN; KIDNEYS; BLOOD; COBALT; IRON; MANGANESE; CHROMIUM; CATTLE; TERRESTRIAL; DELIBERATE EXPOSURE; LACTATION; RADIONUCLIDES

Van Bruwaene, R.; Gerber, G.B.; Kirchmann, R.; Colard, J.; Van Kerkom, J. 1984 Health Physics 46(5):1069-1082

Tissue	Cases Exposure Route	Range	Mean	General Information
4208 Spleen	a) 3 b) 4 c) 4 d) 3 e) 4 Ingestion	a) Not given b) Not given c) Not given d) Not given e) Not given	a) 5208.0 ug/g b) 5295.0 ug/g c) 9575.0 ug/g d) 9371.0 ug/g e) 9538.0 ug/g Dry wt	a) Controls, 0 mg Pb/kg b) 6.25 mg Pb/kg c) 7.81 mg Pb/kg d) 9.77 mg Pb/kg e) 12.21 mg Pb/kg Daily dietary doses. 2 in c) survived 89 and 112 d, others, except controls, died within 24 d. Diarrhea Blindness, death AAS

LIVER; KIDNEYS; SPLEEN; HEART; BRAIN; DELIBERATE EXPOSURE; ADULTS; CATTLE; METAL POISONING; AUTOPSIES; COPPER; LEAD; MANGANESE; IRON; ZINC; METALS; AGRICULTURE; BIOACCUMULATION; DIETS; ANIMAL FEEDS; TERRESTRIAL

Doyle, J.J.; Younger, R.L. 1984 Veterinary and Human Toxicology 26(3):201-204

Iron
7439-89-6
Fe
AtW 55.847, MP 1535 C (pure), 1000-1300 C (cast), 1500 C (wrought), 1300 C (steel), BP 3000 C, VP 1 mm Hg at 1787 C, 10 mm Hg at 2040 C

Cattle
BOS sp.

Tissue	Cases Exposure Route	Range	Mean	General Information
4209 Urine	3 Ingestion	Not given	0.004% of dose	102 d after 2.094-2.166 mCi. As Fe-59. Not detected when 0.200 mCi IV given. 402-533 kg Pie Noir cows. Data available on other organs.

INTESTINES; LIVER; SPLEEN; URINE; MILK; MUSCLES; BONES; FEMUR; RIBS; SKIN; KIDNEYS; BLOOD; COBALT; IRON; MANGANESE; CHROMIUM; CATTLE; TERRESTRIAL; DELIBERATE EXPOSURE; LACTATION; RADIONUCLIDES
Van Bruwaene, R.; Gerber, G.B.; Kirchmann, R.; Colard, J.; Van Kerkom, J. 1984 Health Physics 46(5):1069-1082

Clam
DONAX SERRA

Tissue	Cases Exposure Route	Range	Mean	General Information
4210 Body	251	71-453 ug/g Wet wt	Not applicable	Collected 8/78-8/79 for national marine pollution monitoring program. Range of means. South Africa

BODY; AQUATIC; ENVIRONMENTAL EXPOSURE; SOUTH AFRICA; METALS; ZINC; CADMIUM; COPPER; LEAD; IRON; MANGANESE; NICKEL; COBALT; CHROMIUM; BIOINDICATORS; BIOLOGICAL MONITORING; BIOACCUMULATION; WATER POLLUTION; MOLLUSKS
Watling, H.R.; Watling, R.J. 1983 Bulletin of Environmental Contamination and Toxicology 31:331-338

Clam, soft-shell
MYA ARENARIA

Tissue	Cases Exposure Route	Range	Mean	General Information
4211 Muscle	67	Not given	934+/-711 ug/g Wet wt	Total soft tissues. Collected 1970-74 Oregon, coast AAS

CRUSTACEANS; HEPATOPANCREAS; MOLLUSKS; OREGON ; MUSCLES; BIOACCUMULATION; WATER POLLUTION; CADMIUM; COPPER; IRON; MANGANESE; MERCURY; ZINC
Caldwell, R.S.; Buhler, D.R. 1983 Archives of Environmental Contamination and Toxicology 12:15-23

Cockle
CLINOCARDIUM NUTTALLII

Tissue	Cases Exposure Route	Range	Mean	General Information
4212 Muscle	47	Not given	460+or-360 ug/g Wet wt	Total soft tissues. Collected 1970-74 Oregon, coast AAS

CRUSTACEANS; HEPATOPANCREAS; MOLLUSKS; OREGON ; MUSCLES; BIOACCUMULATION; WATER POLLUTION; CADMIUM; COPPER; IRON; MANGANESE; MERCURY; ZINC
Caldwell, R.S.; Buhler, D.R. 1983 Archives of Environmental Contamination and Toxicology 12:15-23

Iron
7439-89-6
Fe
AtW 55.847, MP 1535 C (pure), 1000-1300 C (cast), 1500 C (wrought), 1300 C (steel), BP 3000 C, VP 1 mm Hg at 1787 C, 10 mm Hg at 2040 C

Cod, Pacific
GADUS MACROCEPHALUS

Tissue	Cases Exposure Route	Range	Mean	General Information
4213 Muscle	Ingestion	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given	a) 2.090+/-0.780 ug/g b) 1.650+/-0.422 ug/g c) 1.580+/-0.241 ug/g d) 0.195+/-0.065 mg/100 g e) 2.052+/-0.799 ug/g f) 2.730+/-0.609 ug/g Wet wt	a) Near Cape Flattery, WA, 50 fish, mean wt 2623+/-1174 g b) Cape Sarichef, AK, 12 fish, 1148+/-649 g c) Cape Ommaney, AK, 11 fish, 798+/-497 g d) Overall mean, combined sites e) Nape section of fish, 30 fillets f) Tail section of fish, 30 fillets. Slightly higher levels in tail indicated differential distribution. Pacific Ocean ES

FISHES; BIOLOGICAL MONITORING; PACIFIC OCEAN; ALUMINUM; BARIUM; CALCIUM; CHROMIUM; COPPER; IRON; MERCURY; POTASSIUM; LITHIUM; MAGNESIUM; MANGANESE; SODIUM; PHOSPHORUS; STRONTIUM; ZINC; AQUATIC; ENVIRONMENTAL EXPOSURE; WATER POLLUTION; FOOD CONTAMINATION; MUSCLES
Teeny, F.M.; Gauglitz, E.J., Jr.; Hall, A.S.; Houle, C.R. 1984 Journal of Agricultural and Food Chemistry 32:852-855

Crab, Dungeness
CANCER MAGISTER

Tissue	Cases Exposure Route	Range	Mean	General Information
4214 Hepatopancreas	59	Not given	40.6+or-34.0 ug/g Wet wt	Collected 1970-74 Oregon, coast AAS
4215 Muscle	73	Not given	5.71+or-4.40 ug/g Wet wt	Collected 1970-74 Oregon, coast AAS

CRUSTACEANS; HEPATOPANCREAS; MOLLUSKS; OREGON ; MUSCLES; BIOACCUMULATION; WATER POLLUTION; CADMIUM; COPPER; IRON; MANGANESE; MERCURY; ZINC
Caldwell, R.S.; Buhler, D.R. 1983 Archives of Environmental Contamination and Toxicology 12:15-23

Duck, long-tailed
CLANGULA HYEMALIS

Tissue	Cases Exposure Route	Range	Mean	General Information
4216 Feathers	a) 28 b) 15 c) 6	a) 290-610 mg/kg b) 59-140 mg/kg c) 270-300 mg/kg Dry wt	a) 380 +or- 63 mg/kg b) 91 +or- 27 mg/kg c) 290 +or- 20 mg/kg Dry wt	a) Males b) Males, oiled c) Females Collected 1980-81. Composite samples Poland, Gdansk Bay AAS

(next page)

Iron
7439-89-6
Fe
AtW 55.847, MP 1535 C (pure), 1000-1300 C (cast), 1500 C (wrought), 1300 C (steel), BP 3000 C, VP 1 mm Hg at 1787 C, 10 mm Hg at 2040 C

Duck, long-tailed
CLANGULA HYEMALIS

(continued)

Tissue	Cases Exposure Route	Range	Mean	General Information
4217 Heart	a) 50 b) 40	a) 140-160 mg/kg b) 150-150 mg/kg Wet wt	a) 150 +or- 12 mg/kg b) 150 +or- 3 mg/kg Wet wt	a) Males b) Females Collected 1980-81. Composite samples Poland, Gdansk Bay AAS
4218 Liver	a) 50 b) 40	a) 370-1200 mg/kg b) 110-1000 mg/kg Wet wt	a) 750+/-110 mg/kg b) 670+/-130 mg/kg Wet wt	a) Males b) Females Collected 1980-81. Composite samples Poland, Gdansk Bay AAS
4219 Muscle	90	a) 30-140 mg/kg b) 63-130 mg/kg c) 91-110 mg/kg d) 120-190 mg/kg Wet wt	a) 87 +or- 10 mg/kg b) 92 +or- 11 mg/kg c) 100 +or- 5 mg/kg d) 150 +or- 20 mg/kg Wet wt	a) Males, breast b) Females, breast c) Males, leg d) Females, leg Collected 1980-81. Composite samples Poland, Gdansk Bay AAS
4220 Stomach	a) 50 b) 40	a) 63-98 mg/kg b) 75-77 mg/kg Wet wt	a) 80 +or- 6 mg/kg b) 76 +or- 3 mg/kg Wet wt	a) Males b) Females Collected 1980-81. Composite samples Poland, Gdansk Bay AAS

POLAND; BIRDS; IRON; ZINC; MANGANESE; COPPER; LEAD; CADMIUM; COBALT; NICKEL; BIOACCUMULATION; LIVER; MUSCLES; HEART; STOMACH; FEATHERS; AQUATIC; WATERFOWL; ENVIRONMENTAL EXPOSURE
Szefer, P.; Falandysz, J. 1983 Science of the Total Environment 29:269-276

Earthworm
PHERETIMA HILGENDORFI

Tissue	Cases Exposure Route	Range	Mean	General Information
4221 Body, whole	37	82.2-690 ug/wet g	343+/-163 ug/wet g	Relatively high levels found in pre-clitellar region. Total burden increased with increased body length up to 18 cm, thereafter it remained constant. Accumulation depended upon metabolic turnover. Japan, Matsuyama City, Tsubaki shrine AAS

IRON; MANGANESE; ZINC; COPPER; LEAD; NICKEL; COBALT; ARSENIC; MERCURY; CADMIUM; BIOACCUMULATION; SOILS; BIOINDICATORS; LAND POLLUTION; EARTHWORMS; BODY; TERRESTRIAL; ENVIRONMENTAL EXPOSURE; JAPAN; METALS; BIOLOGICAL MONITORING
Honda, K.; Nasu, T.; Tatsukawa, R. 1984 Archives of Environmental Contamination and Toxicology 13:427-432

Iron
7439-89-6
Fe
AtW 55.847, MP 1535 C (pure), 1000-1300 C (cast), 1500 C (wrought), 1300 C (steel), BP 3000 C, VP 1 mm Hg at 1787 C, 10 mm Hg at 2040 C

Lizard, water
TRITURUS PYRRHOGASTER

Tissue	Cases Exposure Route	Range	Mean	General Information
4222 Kidney	a) 5 b) 5 Injection	a) Not given b) Not given	a) 99.7+/-34.0 ug/g b) 73.3+/-18.6 ug/g Wet wt	a) Controls, distilled water (0.1 ml/head), I.M. b) CdCl2, I.M. during 11 d (0.5 mg, 3x and 1.0 mg Cd/kg body wt, 2x), killed 1 d after last injection Kidney wt 36+/-5-43+/-6 mg ES
4223 Liver	a) 5 b) 5 Injection	a) Not given b) Not given	a) 172+/-59 ug/g b) 112+/-34 ug/g Wet wt	a) Controls, distilled water (0.1 ml/head), I.M. b) CdCl2, I.M. during 11 d (0.5 mg, 3x and 1.0 mg Cd/kg body wt, 2x), killed 1 d after last injection Liver wt 349+/-108-411+/-80 mg ES
AMPHIBIANS; LIVER; KIDNEYS; DELIBERATE EXPOSURE; CADMIUM; COPPER; ZINC; AQUATIC; TERRESTRIAL; IRON; MAGNESIUM; CALCIUM; PHOSPHORUS				
Suzuki, K.T.; Akitomi, H.; Kawamura, R. 1984 Toxicology Letters 21:179-184				

Mackerel, Atka
PLEUROGRAMMUS MONOPTERYGIUS

Tissue	Cases Exposure Route	Range	Mean	General Information
4224 Muscle	20 Ingestion	Not given	6.159+/-1.729 ug/g Wet wt	Off Kodiak Island, AK. Mean wt 461+/-156 g Pacific Ocean ES
FISHES; BIOLOGICAL MONITORING; PACIFIC OCEAN; ALUMINUM; BARIUM; CALCIUM; CHROMIUM; COPPER; IRON; MERCURY; POTASSIUM; LITHIUM; MAGNESIUM; MANGANESE; SODIUM; PHOSPHORUS; STRONTIUM; ZINC; AQUATIC; ENVIRONMENTAL EXPOSURE; WATER POLLUTION; FOOD CONTAMINATION; MUSCLES				
Teeny, F.M.; Gauglitz, E.J., Jr.; Hall, A.S.; Houle, C.R. 1984 Journal of Agricultural and Food Chemistry 32:852-855				

Otter
LUTRA CANADENSIS

Tissue	Cases Exposure Route	Range	Mean	General Information
4225 Intestine	4 Ingestion	Not given	49+/-10 ug/g	Undisturbed watershed. Specimens from fur trapper. Canada, Ontario, Georgian Bay, Tadenac Lake ES
4226 Kidney	4 Ingestion	Not given	178+/-83 ug/g	Undisturbed watershed. Specimens from fur trapper. Canada, Ontario, Georgian Bay, Tadenac Lake ES

(next page)

Iron

7439-89-6
Fe
AtW 55.847, MP 1535 C (pure), 1000-1300 C (cast), 1500 C (wrought), 1300 C (steel), BP 3000 C, VP 1 mm Hg at 1787 C, 10 mm Hg at 2040 C

Otter
LUTRA CANADENSIS

(continued)

Tissue	Cases Exposure Route	Range	Mean	General Information
4227 Liver	4 Ingestion	Not given	295+/-107 ug/g	Undisturbed watershed. Specimens from fur trapper. Canada, Ontario, Georgian Bay, Tadenac Lake ES
4228 Muscle	4 Ingestion	Not given	158+/-140 ug/g	Undisturbed watershed. Specimens from fur trapper. Canada, Ontario, Georgian Bay, Tadenac Lake ES

BEAVERS; OTTERS; RACCOONS; CANADA; BIOACCUMULATION; BIOMAGNIFICATION; SELENIUM; IRON; COPPER; CADMIUM; CALCIUM; ALUMINUM; MAGNESIUM; MANGANESE; SODIUM; NICKEL; PHOSPHORUS; ZINC; POTASSIUM; DETOXIFICATION; DIETS; LIVER; KIDNEYS; INTESTINES; MUSCLES; AQUATIC; TERRESTRIAL; ENVIRONMENTAL EXPOSURE; BIOLOGICAL MONITORING
Wren, C.D. 1984 Science of the Total Environment 34:177-184

Pollock, walleye
THERAGRA CHALCOGRAMMA

Tissue	Cases Exposure Route	Range	Mean	General Information
4229 Muscle	Ingestion	a) Not given b) Not given c) Not given d) Not given	a) 1.655+/-0.497 ug/g b) 2.017+/-0.388 ug/g c) 2.074+/-0.303 ug/g d) 0.186+/-0.042 mg/100 g Wet wt	a) Caught in Bering Sea, AK, 20 fish, mean wt 965+/-352 g b) Shelik of Strait, AK, 10 fish, 1300+/-488 g c) Cape Ommaney, AK, 12 fish, 323+/-223 g. Site variations in levels. Pacific Ocean ES

FISHES; BIOLOGICAL MONITORING; PACIFIC OCEAN; ALUMINUM; BARIUM; CALCIUM; CHROMIUM; COPPER; IRON; MERCURY; POTASSIUM; LITHIUM; MAGNESIUM; MANGANESE; SODIUM; PHOSPHORUS; STRONTIUM; ZINC; AQUATIC; ENVIRONMENTAL EXPOSURE; WATER POLLUTION; FOOD CONTAMINATION; MUSCLES
Teeny, F.M.; Gauglitz, E.J., Jr.; Hall, A.S.; Houle, C.R. 1984 Journal of Agricultural and Food Chemistry 32:852-855

Pomfret
BRAMA JAPONICA

Tissue	Cases Exposure Route	Range	Mean	General Information
4230 Muscle	24 Ingestion	Not given	2.930+/-0.578 ug/g Wet wt	Gulf of Alaska. Mean wt 1088+/-162 g Pacific Ocean ES

FISHES; BIOLOGICAL MONITORING; PACIFIC OCEAN; ALUMINUM; BARIUM; CALCIUM; CHROMIUM; COPPER; IRON; MERCURY; POTASSIUM; LITHIUM; MAGNESIUM; MANGANESE; SODIUM; PHOSPHORUS; STRONTIUM; ZINC; AQUATIC; ENVIRONMENTAL EXPOSURE; WATER POLLUTION; FOOD CONTAMINATION; MUSCLES
Teeny, F.M.; Gauglitz, E.J., Jr.; Hall, A.S.; Houle, C.R. 1984 Journal of Agricultural and Food Chemistry 32:852-855

Iron
7439-89-6
Fe
AtW 55.847, MP 1535 C (pure), 1000-1300 C (cast), 1500 C (wrought), 1300 C (steel), BP 3000 C, VP 1 mm Hg at 1787 C, 10 mm Hg at 2040 C

Raccoon
PROCYON LOTOR

Tissue	Cases Exposure Route	Range	Mean	General Information
4231 Kidney	4 Ingestion	Not given	393+/-235 ug/g	Undisturbed watershed. Specimens from fur trapper. Canada, Ontario, Georgian Bay, Tadenac Lake ES
4232 Liver	4 Ingestion	Not given	580+/-149 ug/g	Undisturbed watershed. Specimens from fur trapper. Canada, Ontario, Georgian Bay, Tadenac Lake ES
4233 Muscle	4 Ingestion	Not given	63+/-38 ug/g	Undisturbed watershed. Specimens from fur trapper. Canada, Ontario, Georgian Bay, Tadenac Lake ES

BEAVERS; OTTERS; RACCOONS; CANADA; BIOACCUMULATION; BIOMAGNIFICATION; SELENIUM; IRON; COPPER; CADMIUM; CALCIUM; ALUMINUM; MAGNESIUM; MANGANESE; SODIUM; NICKEL; PHOSPHORUS; ZINC; POTASSIUM; DETOXIFICATION; DIETS; LIVER; KIDNEYS; INTESTINES; MUSCLES; AQUATIC; TERRESTRIAL; ENVIRONMENTAL EXPOSURE; BIOLOGICAL MONITORING
Wren, C.D. 1984 Science of the Total Environment 34:177-184

Shad, American
ALOSA SAPIDISSIMA

Tissue	Cases Exposure Route	Range	Mean	General Information
4234 Muscle	13 Ingestion	Not given	9.444+/-2.161 ug/g Wet wt	Near Seaside, OR. Mean wt 1039+/-251 g Pacific Ocean ES

FISHES; BIOLOGICAL MONITORING; PACIFIC OCEAN; ALUMINUM; BARIUM; CALCIUM; CHROMIUM; COPPER; IRON; MERCURY; POTASSIUM; LITHIUM; MAGNESIUM; MANGANESE; SODIUM; PHOSPHORUS; STRONTIUM; ZINC; AQUATIC; ENVIRONMENTAL EXPOSURE; WATER POLLUTION; FOOD CONTAMINATION; MUSCLES
Teeny, F.M.; Gauglitz, E.J., Jr.; Hall, A.S.; Houle, C.R. 1984 Journal of Agricultural and Food Chemistry 32:852-855

Sheep
OVIS sp.

Tissue	Cases Exposure Route	Range	Mean	General Information
4235 Blood, serum	a) 16 b) 16 c) 16	a) Not given b) Not given c) Not given	a) 144.1 ug/dl b) 145.7 ug/dl c) 110.3 ug/dl +/-9.5 S.E.	Lambs whose dams had basal diet fortified with cottonseed meal for 2 yr b) Same as a), basal diet plus 7% undigested sewage solids c) Same as a), basal diet Did not differ from controls. a) differs significantly from b) and c), $p<0.05$. New Mexico AAS

(next page)

Iron
7439-89-6
Fe
AtW 55.847, MP 1535 C (pure), 1000-1300 C (cast), 1500 C (wrought), 1300 C (steel), BP 3000 C, VP 1 mm Hg at 1787 C, 10 mm Hg at 2040 C
Sheep
OVIS sp.

(continued)

Tissue	Cases Exposure Route	Range	Mean	General Information
4236 Bone	a) 8 b) 8 c) 8 Ingestion	a) Not given b) Not given c) Not given	a) 25.06 ug/g b) 25.12 ug/g c) 27.44 ug/g Dry wt +/-1.39 S.E.	a) Lambs from ewes on basal diet fortified with cottonseed meal b) lambs from ewes on basal diet plus 7% undigested sewage solids Lambs from ewes on basal diet. New Mexico AAS
4237 Kidney	Ingestion	a) Not given b) Not given c) Not given	a) 116.88 ug/g b) 121.38 ug/g c) 116.12 ug/g Dry wt	a) Lambs from ewes on basal diet fortified with cottonseed meal b) Lambs from ewes on basal diet plus 7% undigested sewage solids c) Lambs from ewes on basal diet. New Mexico AAS
4238 Liver	a) 8 b) 8 c) 8 Ingestion	a) Not given b) Not given c) Not given	a) 97.25 ug/g b) 130.62 ug/g c) 88.62 ug/g Dry wt +/-9.18 S.E.	a) Lambs from ewes on basal diet fortified with cottonseed meal b) Lambs from ewes on basal diet plus 7% undigested sewage solids c) Lambs from ewes on basal diet. a) significantly different from b), p>0.01. New Mexico AAS

KIDNEYS; LIVER; BONES; SHEEP; TERRESTRIAL; ENVIRONMENTAL EXPOSURE; DELIBERATE EXPOSURE; NEW MEXICO; CADMIUM; CHROMIUM; COPPER; IRON; MERCURY; NICKEL; LEAD; ZINC; METALS; ANIMAL FEEDS; AGRICULTURE; BIOACCUMULATION; BIOLOGICAL MONITORING; FARMS; FOOD CONTAMINATION; LAND POLLUTION; SEWAGE; CALCIUM; BLOOD SERUM; MAGNESIUM; POTASSIUM; PHOSPHORUS; SODIUM
Hudgens, R.E.; Hallford, D.M. 1984 Nutrition Reports International 29(1):11-21

Silkworm
BOMBYX MORI

Tissue	Cases Exposure Route	Range	Mean	General Information
4239 Alimentary canal	Ingestion	a) Not given b) Not given	a) 177+/-22 ug/g b) 149+/-25 ug/g Dry wt	a) Controls b) Treatment After diet containing no (controls), or 80 ug Cd/g wet wt, fed from hatching until 6th day of 5th instar. Japan AAS
4240 Fat body	Ingestion	a) Not given b) Not given	a) 20.1+/-1.7 ug/g b) 22.7+/-5.5 ug/g Dry wt	a) Controls b) Treatment After diet containing no (controls), or 80 ug Cd/g wet wt, fed from hatching until 6th day of 5th instar. Japan AAS

(next page)

Iron
7439-89-6
Fe
AtW 55.847, MP 1535 C (pure), 1000-1300 C (cast), 1500 C (wrought), 1500 C (steel), BP 3000 C, VP 1 mm Hg at 1787 C, 10 mm Hg at 2040 C

Silkworm
BOMBYX MORI

(continued)

Tissue	Cases Exposure Route	Range	Mean	General Information
4241 Gonads	Ingestion	a) Not given b) Not given	a) 49.7 ug/g b) 71.4 ug/g Dry wt	a) Controls b) Treatment After diet containing no (controls), or 80 ug Cd/g wet wt, fed from hatching until 6th day of 5th instar. Japan AAS
4242 Head	Ingestion	a) Not given b) Not given	a) 57.8+/-2.1 ug/g b) 82.3+/-28.0 ug/g Dry wt	a) Controls b) Treatment After diet containing no (controls), or 80 ug Cd/g wet wt, fed from hatching until 6th day of 5th instar. Japan AAS
4243 Integument	Ingestion	a) Not given b) Not given	a) 23.3+/-5.1 ug/g b) 36.2+/-12.4 ug/g Dry wt	a) Controls b) Treatment After diet containing no (controls), or 80 ug Cd/g wet wt, fed from hatching until 6th day of 5th instar. Japan AAS
4244 Malpighian tubes	Ingestion	a) Not given b) Not given	a) 65.4+/-10.1 ug/g b) 58.0+/-2.6 ug/g Dry wt	a) Controls b) Treatment After diet containing no (controls), or 80 ug Cd/g wet wt, fed from hatching until 6th day of 5th instar. Japan AAS
4245 Silk gland	Ingestion	a) Not given b) Not given	a) 20.3+/-5.1 ug/g b) 25.4+/-6.3 ug/g Dry wt	a) Controls b) Treatment After diet containing no (controls), or 80 ug Cd/g wet wt, fed from hatching until 6th day of 5th instar. Japan AAS
4246 Trachea	Ingestion	a) Not given b) Not given	a) 44.9+/-6.3 ug/g b) 65.1+/-8.6 ug/g Dry wt	a) Controls b) Treatment After diet containing no (controls), or 80 ug Cd/g wet wt, fed from hatching until 6th day of 5th instar. Japan AAS

SILK GLAND; HEAD; TRACHEA; MALPIGHIAN TUBES; GASTROINTESTINAL TRACT; GONADS; FAT BODY; INTEGUMENT; DELIBERATE EXPOSURE; SILKWORMS; TERRESTRIAL; JAPAN; METAL POISONING; METALS; CADMIUM; ZINC; COPPER; CALCIUM; IRON; MAGNESIUM; MANGANESE; ALUMINUM; SODIUM; POTASSIUM; BIOACCUMULATION

Suzuki, K.T.; Aoki, Y.; Nishikawa, M.; Masui, H.; Matsubara, F. 1984 Comparative Biochemistry and Physiology 79C(2):249-253

Iron
7439-89-6
Fe
AtW 55.847, MP 1535 C (pure), 1000-1300 C (cast), 1500 C (wrought), 1300 C (steel), BP 3000 C, VP 1 mm Hg at 1787 C, 10 mm Hg at 2040 C

Snail
BULLIA RHODOSTOMA

Tissue	Cases Exposure Route	Range	Mean	General Information
4247 Body	757	22-93 ug/g Wet wt	Not applicable	Collected 8/78-8/79 for national marine pollution monitoring program. Range of means. South Africa
BODY; AQUATIC; ENVIRONMENTAL EXPOSURE; SOUTH AFRICA; METALS; ZINC; CADMIUM; COPPER; LEAD; IRON; MANGANESE; NICKEL; COBALT; CHROMIUM; BIOINDICATORS; BIOLOGICAL MONITORING; BIOACCUMULATION; WATER POLLUTION; MOLLUSKS				
Watling, H.R.; Watling, R.J. 1983 Bulletin of Environmental Contamination and Toxicology 31:331-338				

Snail, saltwater
NUCELLA LAPILLUS

Tissue	Cases Exposure Route	Range	Mean	General Information
4248 Body	40 Ingestion	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given	a) 147.6+/-29.6 ppm b) 121.0+/-38.4 ppm c) 147.8+/-25.6 ppm d) 189.2+/-59.9 ppm e) 177.4+/-37.8 ppm f) 200.3+/-50.3 ppm	a) Eastport, ME, large embayment b) Pemaquid Pt., ME, exposed coastal c) New Harbor, ME, close to marina and harbors, sheltered harbor d) Manomet, MA, large embayment e) Pt. Judith, RI, industrial effluents, marinas, coastal f) Avery Pt., CT, industrial and sewage effluents, marinas, river mouth. Pseudohermaphrodites (females with penis) common at c), e), f), polluted boating areas (94-100% frequency). Relatively unpolluted areas, no abnormalities a), b), d). "Imposex" associated with heavy metals, Fe not implicated. Maine; Massachusetts; Rhode Island; Connecticut AAS
SNAILS; BODY; CADMIUM; ZINC; COPPER; CHROMIUM; IRON; AQUATIC; WATER POLLUTION; POPULATION EXPOSURE; SEX; MAINE; RHODE ISLAND; MASSACHUSETTS; CONNECTICUT; ENVIRONMENTAL EXPOSURE				
Miller, E.R.; Pondick, J.S. 1984 Bulletin of Environmental Contamination and Toxicology 33:612-620				

Sole, Dover
MICROSTOMUS PACIFICUS

Tissue	Cases Exposure Route	Range	Mean	General Information
4249 Muscle	Ingestion	a) Not given b) Not given c) Not given d) Not given	a) 1.984+/-0.554 ug/g b) 1.795+/-0.413 ug/g c) 2.560+/-0.641 ug/g d) 0.206+/-0.054 mg/100 g Wet wt	a) Caught near Newport, OR, 29 fish, mean wt 660+/-326 g b) Cape Ommaney, AK, 11 fish, 506+/-214 g c) Santa Cruz, CA, 10 fish, 212+/-68 g d) Overall mean, combined sites. Site variations in levels. Pacific Ocean ES
FISHES; BIOLOGICAL MONITORING, PACIFIC OCEAN; ALUMINUM; BARIUM; CALCIUM; CHROMIUM; COPPER; IRON; MERCURY; POTASSIUM; LITHIUM; MAGNESIUM; MANGANESE; SODIUM; PHOSPHORUS; STRONTIUM; ZINC; AQUATIC; ENVIRONMENTAL EXPOSURE; WATER POLLUTION; FOOD CONTAMINATION; MUSCLES				
Teeny, F.M.; Gauglitz, E.J., Jr.; Hall, A.S.; Houle, C.R. 1984 Journal of Agricultural and Food Chemistry 32:852-855				

Iron
7439-89-6
Fe
AtW 55.847, MP 1535 C (pure), 1000-1300 C (cast), 1500 C (wrought), 1300 C (steel), BP 3000 C, VP 1 mm Hg at 1787 C, 10 mm Hg at 2040 C

Swine
SUS sp.

Tissue	Cases Exposure Route	Range	Mean	General Information
4250 Blood, plasma		a) 106.8+/-20.7-205.0+/-28.0 ug b) 126.3+/-24.0-183.6+/-26.8 ug c) 78.0+/-10.5-159.8+/-31.3 ug d) 92.8+/-16.4-188.8+/-21.8 ug/dl S.E.	a) Not given b) Not given c) Not given d) Not given	a) 6 sows (controls) 86 d pregnancy-14 d lactation, fed semi-purified diet with 63 mg/kg Zn, 2 kg/d during pregnancy, ad libitum during lactation b) 6 sows (low Zn), 13 mg/kg Zn, same regime c) Piglets of control sows, birth-14 d d) Piglets of low Zn sows, birth-14 d Purebred Landrace sows, 29-41 mo old, multipara, wt 198-267 kg. Farrowing induced d 114. No wt difference between controls and low Zn sows. No differences in levels between controls and others. Tendency toward lower Fe with advancing pregnancy. Piglets given Fe injections at 2d. Ranges of means.

BLOOD PLASMA; MILK; TERRESTRIAL; DELIBERATE EXPOSURE; ADULTS; NEWBORN; ZINC; COPPER; IRON; AMMONIA; ANIMAL FEEDS; DIETS; LACTATION; PREGNANCY
Kalinowski, J.; Chavez, E.R. 1984 Canadian Journal of Animal Science 64:749-758

Tissue	Cases Exposure Route	Range	Mean	General Information
4251 Blood, plasma	10 Injection	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given	a) 132.7+/-8.6 ug/dl b) 170.8+/-31.6 ug/dl c) 274.4+/-35.1 ug/dl d) 136.1+/-6.5 ug/dl e) 368.5+/-46.5 ug/dl f) 149.0+/-9.0 ug/dl S.E.	a) Treated pigs, d 0, 5 cases b) Control pigs, 5 cases c) Treated, d 21 d) Controls e) Treated, d 36 f) Controls In a), c) and e), 300 mg dextran iron/d for 36 d. LW pigs, 76-91 d old, 33.7+/-0.8 kg, fed classic diet. Changes in bone remodeling
4252 Bone	a) 5 b) 5 Injection	a) Not given b) Not given	a) 360.40+/-42.8 ppm b) 34.10+/-1.18 ppm Of dry matter S.E.	a) Treated pigs b) Controls In a), 300 mg dextran iron/d for 36 d. LW pigs, 76-91 d old, 33.7+/-0.8 kg, fed classic diet.

BLOOD PLASMA; LIVER; BONES; SWINE; TERRESTRIAL; DELIBERATE EXPOSURE; BONE DISEASES; COMPARATIVE EVALUATIONS; IRON
de Vernejoul, M.C.; Pointillart, A.; Golenzer, C.C.; Morieux, C.; Bielakoff, J.; Modrowski, D.; Miravet, L. 1984 American Journal of Pathology 116:377-384

Iron
7439-89-6
Fe
AtW 55.847, MP 1535 C (pure), 1000-1300 C (cast), 1500 C (wrought), 1300 C (steel), BP 3000 C, VP 1 mm Hg at 1787 C, 10 mm Hg at 2040 C

Swine
SUS sp.

Tissue	Cases Exposure Route	Range	Mean	General Information
4253 Kidney	a) 12 b) 12 c) 12 d) 12 d) 12 e) 12 f) 12 Ingestion	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given	a) 202 ppm b) 207 ppm c) 194 ppm d) 216 ppm e) 182 ppm f) 186 ppm Dry wt	a) 7.5 ppm b) 15 ppm c) 30 ppm d) 60 ppm e) 120 ppm f) 240 ppm Dietary levels till slaughter at 91 kg body wt Weanling, crossbred pigs, mean pre-treatment wt 12.1 kg No effects on weight gain. AAS
4254 Liver	a) 12 b) 12 c) 12 d) 12 d) 12 e) 12 f) 12 Ingestion	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given	a) 757 ppm b) 905 ppm c) 750 ppm d) 930 ppm e) 472 ppm f) 330 ppm Dry wt	a) 7.5 ppm b) 15 ppm c) 30 ppm d) 60 ppm e) 120 ppm f) 240 ppm Dietary levels till slaughter at 91 kg body wt Weanling, crossbred pigs, mean pre-treatment wt 12.1 kg No effects on weight gain. AAS

SWINE; JUVENILES; MARYLAND; KIDNEYS; LIVER; MUSCLES; COPPER; IRON; BIOACCUMULATION; DIETS

Bradley, B.D.; Graber, G.; Condon, R.J.; Frobish, L.T. 1983 Journal of Animal Science 56(3):625-630

Tissue	Cases Exposure Route	Range	Mean	General Information
4255 Liver	a) 5 b) 5 Injection	a) Not given b) Not given	a) 586+/-91 ug/100 mg b) 24+/-8 ug/100 mg Dry wt S.E.	a) Treated pigs b) Controls In a), 300 mg dextran iron/d for 36 d. LW pigs, 76-91 d old, 33.7+/-0.8 kg, fed classic diet. Changes in bone remodeling

BLOOD PLASMA; LIVER; BONES; SWINE; TERRESTRIAL; DELIBERATE EXPOSURE; BONE DISEASES; COMPARATIVE EVALUATIONS; IRON

de Vernejoul, M.C.; Pointillart, A.; Golenzer, C.C.; Morieux, C.; Bielakoff, J.; Modrowski, D.; Miravet, L. 1984 American Journal of Pathology 116:377-384

Iron
7439-89-6
Fe
AtW 55.847, MP 1535 C (pure), 1000-1300 C (cast), 1500 C (wrought), 1300 C (steel); BP 3000 C, VP 1 mm Hg at 1787 C, 10 mm Hg at 2040 C

Swine
SUS sp.

Tissue	Cases Exposure Route	Range	Mean	General Information
4256 Milk	60 Ingestion	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given g) Not given h) Not given	a) 2.17 ug/ml b) 2.07 ug/ml c) 2.01 ug/ml d) 2.28 ug/ml e) 1.81 ug/ml f) 1.75 ug/ml g) 1.63 ug/ml h) 2.67 ug/ml	a) Colostrum, no dietary supplement b) Colostrum, 50 ppm Zn c) Colostrum, 500 ppm Zn d) Colostrum, 5000 ppm Zn e) After 3 wk of lactation, no dietary supplement f) After 3 wk of lactation, 50 ppm Zn g) After 3 wk of lactation, 500 ppm Zn h) After 3 wk of lactation, 5000 ppm Zn Crossbred and pure Yorkshire gilts, mean pretreatment wt 30 kg AAS

SWINE; COLOSTRUM; MILK; CALCIUM; COPPER; IRON; MAGNESIUM; MINERALS; PHOSPHORUS; ZINC; ANIMAL FEEDS; DIETS; LACTATION
Hill, G.M.; Miller, E.R.; Ku, P.K. 1983 Journal of Animal Science 57(1):123-129

Tissue	Cases Exposure Route	Range	Mean	General Information
4257 Muscle	a) 12 b) 12 c) 12 d) 12 d) 12 e) 12 f) 12 Ingestion	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given	a) 19.4 ppm b) 16.7 ppm c) 15.6 ppm d) 17.2 ppm e) 17.5 ppm f) 16.2 ppm Dry wt	a) 7.5 ppm b) 15 ppm c) 30 ppm d) 60 ppm e) 120 ppm f) 240 ppm Dietary levels till slaughter at 91 kg body wt Weanling, crossbred pigs, mean pre-treatment wt 12.1 kg No effects on weight gain. AAS

SWINE; JUVENILES; MARYLAND; KIDNEYS; LIVER; MUSCLES; COPPER; IRON; BIOACCUMULATION; DIETS
Bradley, B.D.; Graber, G.; Condon, R.J.; Frobish, L.T. 1983 Journal of Animal Science 56(3):625-630

Whiting, Pacific
MERLUCCIUS PRODUCTUS

Tissue	Cases Exposure Route	Range	Mean	General Information
4258 Muscle	a) 20 b) 32 Ingestion	a) Not given b) Not given	a) 2.579+/-0.720 ug/g b) 2.437+/-0.416 ug/g Wet wt	a) Near Astoria, OR, mean wt 873+/-246 g b) Refrigerated 2 d in seawater, Astoria, OR, 937+/-227 g. Interspecies variations among 7 species studied. Pacific Ocean ES

FISHES; BIOLOGICAL MONITORING; PACIFIC OCEAN; ALUMINUM; BARIUM; CALCIUM; CHROMIUM; COPPER; IRON; MERCURY; POTASSIUM; LITHIUM; MAGNESIUM; MANGANESE; SODIUM; PHOSPHORUS; STRONTIUM; ZINC; AQUATIC; ENVIRONMENTAL EXPOSURE; WATER POLLUTION; FOOD CONTAMINATION; MUSCLES
Teeny, F.M.; Gauglitz, E.J., Jr.; Hall, A.S.; Houle, C.R. 1984 Journal of Agricultural and Food Chemistry 32:852-855

Iron, isotope of mass 55
14681-59-5
Fe
Swine
SUS sp.

Tissue	Cases Exposure Route	Range	Mean	General Information
4359 Blood, plasma	13 Injection	a) 900-50 cpm/ml b) Not given	a) Not applicable b) 4.6+/-0.6%	a) 0.5-48 hr, peak (1900 cpm/ml) 1 hr after 5 mg as Na [Fe-55] [C-14] EDTA complex b) % dose incorporated into hemoglobin 15 d after 5 mg as Na [Fe-55] [C-14] EDTA complex. Venezuela Scintillation counting
4360 Intestine	a) 1 b) 1 c) 1 d) 1 e) 1 f) 1 g) 1 h) 1 Ingestion	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given	a) 1000 cpm/100 mg b) 10,000 cpm/100 mg c) 3500 cpm/100 mg d) 9000 cpm/100 mg e) 2000 cpm/100 mg f) 2000 cpm/100 mg g) 2000 cpm/100 mg h) 1000 cpm/100 mg	a) 1 hr, duodenum b) 1 hr, 0.5 m c) 1 hr, 1.0 m d) 1 hr, 1.5 m e) 2 hr, 0.5 m f) 2 hr, 5.0 m g) 2 hr, 6.0 m f) 5 hr, 0.5 m Areas of peak activity of mucosal layer in duodenum or at locations along jejunum after 36 mg of Na [Fe-55] [C-14] EDTA complex. Estimated from graph. Venezuela Scintillation counting
4361 Stomach	a) 1 b) 1 c) 1 d) 1 e) 1 f) 1 Ingestion	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given	a) 6000 cpm/100 mg b) 4000 cmp/100 mg c) 500 cpm/100 mg d) 1000 cpm/100 mg e) Not detected f) 500 cpm/100 mg	a) 1 hr, fundus b) 1 hr pylorus c) 2 hr fundus d) 2 hr pylorus e) 5 hr, fundus f) 5 hr, pylorus Activity of mucosal layer at two locations after 36 mg of Na [Fe-55] [C-14] EDTA complex. Estimated from graph. Venezuela Scintillation counting
4362 Urine	13 Injection	Not given	0.3+/-0.6%	% dose recovered 48 hr after 5 mg as Na [Fe-55] [C-14] EDTA complex. Venezuela Scintillation counting

STOMACH; INTESTINES; BLOOD PLASMA; URINE; SWINE; TERRESTRIAL; DELIBERATE EXPOSURE; VENEZUELA; IRON; BIOACCUMULATION; RADIONUCLIDES; DRUGS

Candela, E.; Camacho, M.V.; Marinez-Torres, C.; Perdomo, J.; Mazzarri, G.; Acurero, G.; Layrisse, M. 1984 Journal of Nutrition 114:2204-2211

Lanthanum
7439-91-0
La
AtW 138.906, MP 920 C, BP 3454 C, VP 3230 mm Hg at 400 C, 3420 mm Hg at 760 C
Cattle
BOS sp.

Tissue	Cases Exposure Route	Range	Mean	General Information
4263 Hair	Ingestion	Not given	0.10 ppm	Data from one representative site. Deposition of elements on pasture. Collected Oct-Nov 1981-2. 5 yr old cows, 10 samples/farm, 9-14 farms, 7-12 sites. Significantly correlated with bulk deposition. Belgium NA

CATTLE; HAIR; BIOLOGICAL MONITORING; AIR POLLUTION; LAND POLLUTION; ARSENIC; BARIUM; BROMINE; CERIUM; COBALT; CHROMIUM; CESIUM; IRON; POTASSIUM; LANTHANUM; SODIUM; RUBIDIUM; ANTIMONY; SCANDIUM; SELENIUM; SAMARIUM; THORIUM; ZINC; FOOD CONTAMINATION; BIOACCUMULATION; BIOCONCENTRATION; TERRESTRIAL; ENVIRONMENTAL EXPOSURE; TRACE ELEMENTS
Ronneau, C.; Cara, J. 1984 Science of the Total Environment 39:135-142

Lead
7439-92-1
Pb
AtW 207.2, MP 327.4 C, BP 1740 C, VP 1.77 mm Hg at 1000 C, 1 mm Hg at 970 C, 10 mm Hg at 1160 C
Arca

Tissue	Cases Exposure Route	Range	Mean	General Information
4264 Muscle	Ingestion	a) Not given b) Not given	a) 0.79 ug/g b) 0.59 ug/g Wet wt	a) Small area b) Big area Coastal waters, control area. Levels below safe limits. India, Bombay

MUSCLES; BIOLOGICAL MONITORING; INDIA; INDUSTRIAL POLLUTION; WATER POLLUTION; BIOCONCENTRATION; FOOD CONTAMINATION; LEAD; LEAD-210; PRAWNS; SHRIMP; OYSTERS; AQUATIC; ENVIRONMENTAL EXPOSURE; FISHES; RADIONUCLIDES
Borkar, M.D.; Paul, A.C.; Pillai, K.C. 1984 Science of the Total Environment 34:279-288

Bass, rock
AMBLOPLITES RUPESTRIS

Tissue	Cases Exposure Route	Range	Mean	General Information
4265 Body	14	3.6-18.0 ug/g Dry wt	8.1 ug/g Dry wt Median	Highway-contaminated stream. No positive correlation with total length. Sediment association influenced inter-specific variation. Virginia, Back Creek AAS

BODY; AQUATIC; VIRGINIA; CADMIUM; LEAD; NICKEL; ZINC; METALS; AIR POLLUTION; WATER POLLUTION; BIOACCUMULATION; BIOLOGICAL MONITORING; FISHES; BONES
Ney, J.J.; Van Hassel, J.H. 1983 Archives of Environmental Contamination and Toxicology 12:701-706

Lead
7439-92-1
Pb
AtW 207.2, MP 327.4 C, BP 1740 C, VP 1.77 mm Hg at 1000 C, 1 mm Hg at 970 C, 10 mm Hg at 1160 C

Bat, grey-headed fruit
PTEROPUS POLIOCEPHALUS

Tissue	Cases Exposure Route	Range	Mean	General Information
4266 Kidney	a) 1 b) 1	a) Not applicable b) Not applicable	a) 20.5 mg/kg b) 44.6 mg/kg	a) Bat A b) Bat B Collected in moribund condition. Australia, Queensland, Brisbane Bat A, severe muscle fasciculation, excessive salivation, diarrhea, ataxia. Bat B, inability to fly, aggressive behavior Scattered brain and lung hemorrhages, moderately congested liver, enlarged proximal tubular epithelial cells and intranuclear inclusions in kidneys
KIDNEYS; LIVER; AUSTRALIA; ADULTS; LEAD POISONING; LEAD; BIOACCUMULATION; BATS; TERRESTRIAL; ENVIRONMENTAL EXPOSURE				
Sutton, R.H.; Wilson, P.D. 1983 Journal of Wildlife Diseases 19(3):294-295				

Buffalo, water
BOS sp.

Tissue	Cases Exposure Route	Range	Mean	General Information
4267 Lung	Inhalation	a) Not given b) Not given	a) 4268+/-670 mg/kg b) 983+/-162 mg/kg	a) Orissa area b) West Bengal area Polluted industrial and mining areas. Controls from non-industrial regions had no gross pulmonary changes, no data given. Necropsies on food animals. India Lungs were dirty pink color mottled with black. 20 trace metals present. Location of particulates suggested paralyzed clearance mechanisms. Aggregates of lymphocytes and dust-laden macrophages. X-ray fluorescence
CATTLE; ENVIRONMENTAL EXPOSURE; AIR POLLUTION; INDUSTRIAL POLLUTION; TERRESTRIAL; MERCURY; IRON; ZINC; LEAD; LUNGS; INDIA; AUTOPSIES; FOOD CONTAMINATION; BIOLOGICAL MONITORING; COPPER; BIOINDICATORS; DUST; INHALATION				
Dogra, R.K.S.; Shanker, R.; Saxena, A.K.; Khanna, S.; Srivastava, S.N.; Shukla, L.J.; Zaidi, S.H. 1984 Environmental Pollution (Series A) 36:109-120				

Bufflehead
BUCEPHALA ALBEOLA

Tissue	Cases Exposure Route	Range	Mean	General Information
4268 Bone	18 Ingestion	<0.5-132.1 ug/g Dry wt	12.4 ug/g Dry wt	80% average recovery, data not corrected for recovery. Collected winters of 1976-77, 1979-80. Extensive interspecies variations. Chesapeake Bay AAS

(next page)

Lead
7439-92-1
Pb
AtW 207.2, MP 327.4 C, BP 1740 C, VP 1.77 mm Hg at 1000 C, 1 mm Hg at 970 C, 10 mm Hg at 1160 C

Bufflehead
BUCEPHALA ALBEOLA

(continued)

Tissue	Cases Exposure Route	Range	Mean	General Information
4260 Kidney	17 Ingestion	<0.5-445.6 ug/g Dry wt	36.4 ug/g Dry wt	Collected winters of 1976-77, 1979-80. Extensive interspecies variations. Chesapeake Bay AAS
AQUATIC; CADMIUM; LEAD; COPPER; ZINC; LIVER; KIDNEYS; BONES; BIOLOGICAL MONITORING; UNITED STATES; BIOACCUMULATION; BIRDS; TERRESTRIAL; WATERFOWL; DUCKS; ENVIRONMENTAL EXPOSURE; DIETS; METALS				
Giulio, R.T.; Scanlon, P.F. 1984 Environmental Pollution (Series A) 35:29-48				

Bullhead
COTTUS GOBIO L.

Tissue	Cases Exposure Route	Range	Mean	General Information
4270 Body	Ingestion Inhalation	a) Not given b) Not given c) Not given d) Not given e) Not given	a) 2.694+/-0.061 ng/g b) 3.403+/-0.208 ng/g c) 3.064+/-0.099 ng/g d) 3.353+/-0.052 ng/g e) 3.120+/-0.083 ng/g Log dry wt S.E.	a) Site 10, 8/5/81, 4 cases, <40 mm long b) Site 17, 8/6/81, 5 cases, <40 mm c) Site 10, 8/5/81, 10 cases, 50-72 mm d) Site 14, 8/5/81, 3 cases, 50-72 mm e) Site 10, 11/4/81, 5 cases, <40 mm Females. Extensive statistical analysis. Body burdens increased with level in sediment, body wt, and length of exposure. Great Britain, Derbyshire, River Ecclesbourne AAS
FISHES; UNITED KINGDOM; AQUATIC; ENVIRONMENTAL EXPOSURE; COMPARATIVE EVALUATIONS; SEDIMENTS; CADMIUM; LEAD				
Moriarty, F.; Hanson, H.M.; Freestone, P. 1984 Environmental Pollution (Series A) 34:297-320				

Lead
7439-92-1
Pb
AtW 207.2, MP 327.4 C, BP 1740 C, VP 1.77 mm Hg at 1000 C, 1 mm Hg at 970 C, 10 mm Hg at 1160 C
Caddisfly
TRICHOPTERA

Tissue	Cases Exposure Route	Range	Mean	General Information
4271 Body		a) 0-350 ppm b) 500-920 ppm c) 0-250 ppm d) 250-3050 ppm e) 450-8550 ppm	a) Not given b) Not given c) Not given d) Not given e) Not given	a) Controls during dry weather b) Controls during rain, only c) Station 2, which drains half of business district, during dry weather d) Station 2, which drains half of business district during rain e) Station 3, which receives total cumulative runoff from the city, during dry weather Additional data for Station 1, a control with an artificial substrate, and three weather regimes: dry, rain and snow/thaw (wet=rain and snow/thaw) Estimated from graph Massachusetts, Greenfield, Green River AAS

URBAN AREAS; WATER POLLUTION; BIOINDICATORS; COPPER; CADMIUM; ZINC; LEAD; INSECTS; AQUATIC; BENTHOS; BODY; MASSACHUSETTS; ENVIRONMENTAL EXPOSURE
Medeiros, C.; LeBlanc, R.; Coler, R.A. 1983 Environmental Toxicology and Chemistry 2:119-126

Canvasback
AYTHYA VALISINERIA

Tissue	Cases Exposure Route	Range	Mean	General Information
4272 Bone	65 Ingestion	<0.5-45.5 ug/g Dry wt	7.0 ug/g Dry wt	80% average recovery data not corrected for recovery. Collected winters of 1976-77, 1979-80. Extensive interspecies variations. Chesapeake Bay AAS
4273 Kidney	68 Ingestion	<0.5-292.9 ug/g Dry wt	13.3 ug/g Dry wt	Collected winters of 1976-77, 1979-80. Extensive interspecies variations. Chesapeake Bay AAS

AQUATIC; CADMIUM; LEAD; COPPER; ZINC; LIVER; KIDNEYS; BONES; BIOLOGICAL MONITORING; UNITED STATES; BIOACCUMULATION; BIRDS; TERRESTRIAL; WATERFOWL; DUCKS; ENVIRONMENTAL EXPOSURE; DIETS; METALS
Giulio, R.T.; Scanlon, P.F. 1984 Environmental Pollution (Series A) 35:29-48

Lead
7439-92-1
Pb
AtW 207.2, MP 327.4 C, BP 1740 C, VP 1.77 mm Hg at 1000 C, 1 mm Hg at 970 C, 10 mm Hg at 1160 C
Cattle
BOS sp.

Tissue	Cases Exposure Route	Range	Mean	General Information
4274 Blood	130	Not given	4.37+/-0.24 nmol/g Wet wt S.E.	Data from toxicology lab records, 1968-1982. Poisoning more common in animals <6 mo old, dairy breeds (0.022/1000) than beef breeds (0.0065/1000), seasonally May-August. Canada, Saskatchewan, Saskatoon Central nervous system abnormalities (blindness, muscle twitching, ataxia, hyperirritability) and gastrointestinal disturbances (anorexia, salivation, rumen stasis). AAS
LEAD POISONING; CATTLE; LEAD; ENVIRONMENTAL EXPOSURE; TERRESTRIAL; CANADA; LIVER; KIDNEYS; BRAIN; BLOOD				
Blakley, B.R. 1984 Veterinary and Human Toxicology 26(6):505-507				

Tissue	Cases Exposure Route	Range	Mean	General Information
4275 Blood	a) 4 b) 4 c) 10 d) 1 Ingestion	a) 0.03-0.04 mg/kg b) 0.30-0.90 mg/kg c) 1.08-3.21 mg/kg d) Not applicable Wet wt	a) 0.03 +or- 0.01 mg/kg b) 0.47 +or- 0.29 mg/kg c) 1.57 +or- 0.62 mg/kg d) 2.41 mg/kg Wet wt	a) Controls b) 2.7 mg/kg for 20 days c) 5 mg/kg for 7 days d) 20 mg/kg for 5 days Pb acetate doses and exposure times. Animals sacrificed when majority showed signs of intoxication Holstein calves, age 9-12 wk, wt ca 55 kg Depression, hypoglossal paresis, suckling problems, unsteadiness, trunkal ataxia, muscular tremors, generalized seizures, opistotomus, death of respiratory failure. Seizures and death within 48-72 hr at 2.7 mg/kg, 24-36 hr at 5 mg/kg, and 8 hr at 20 mg/kg following hypoglossal paresis. AAS
CATTLE; JUVENILES; NERVES; TEXAS; LEAD POISONING; BLOOD; BONES; BRAIN; HEART; KIDNEYS; LIVER; MUSCLES; PANCREAS; SPINAL CORD; SPLEEN; LEAD; BIOACCUMULATION				
Zmudski, J.; Bratton, G.R.; Womac, C.; Rowe, L. 1983 Bulletin of Environmental Contamination and Toxicology 30:435-441				

Tissue	Cases Exposure Route	Range	Mean	General Information
4276 Blood	104 Ingestion	0.01-0.21 ppm	0.063+/-0.028 ppm	Normal levels. Study also determined there was no effect of Pb on free erythrocyte porphyrin and delta-aminolevulinic acid dehydratase. No differences between breeds, or age groups (Angus, Hereford, Hereford X Angus, Charolais, 3 others. Ages 1-10 yr). Missouri AAS
BLOOD; CATTLE; TERRESTRIAL; MISSOURI; ADULTS; ENVIRONMENTAL EXPOSURE; LEAD; FARMS; BIOACCUMULATION				
Ruhr, L.P. 1984 Veterinary and Human Toxicology 26(2):105-107				

Lead
7439-92-1
Pb
AtW 207.2, MP 327.4 C, BP 1740 C, VP 1.77 mm Hg at 1000 C, 1 mm Hg at 970 C, 10 mm Hg at 1160 C

Cattle
BOS sp.

Tissue	Cases Exposure Route	Range	Mean	General Information
4277 Blood	a) 30 b) 22 c) 30 d) 15	a) 1.21-5.45 umol/l b) 0.24-0.53 umol/l c) 0.82-3.40 umol/l d) 0.09-0.60 umol/l	a) 3.09 umol/l b) 0.29 umol/l c) 1.44 umol/l d) 0.27 umol/l Medians	a) 1976, exposed to Pb-contaminated pastures b) 1976, controls c) 1982, Pb-exposed d) 1982, controls Bag filters for cleaning smelter flue gas installed in 1978. Yugoslavia, small farms up to 5000 m from lead smelter AAS

CATTLE; LEAD; TERRESTRIAL; ENVIRONMENTAL EXPOSURE; YUGOSLAVIA; LAND POLLUTION; SMELTERS; BLOOD

Karacic, V.; Prpic-Majic, D.; Skender, L. 1984 Bulletin of Environmental Contamination and Toxicology 32:290-294

Tissue	Cases Exposure Route	Range	Mean	General Information
4278 Blood	18 Ingestion	a) 2+/-1-3+/-1 ug/dl b) Not given c) Not given d) Not given e) Not given f) Not given g) Not given h) Not given i) Not given	a) Not given b) 75+/-6 ug/dl c) 104+/-15 ug/dl d) 78+/-10 ug/dl e) 131+/-14 ug/dl f) 20+/-8 ug/dl g) 37+/-5 ug/dl h) 33+/-9 ug/dl i) 53+/-15 ug/dl	a) Baseline, all groups, 18 cases b) Day 2, calves fed milk-replacer diet, Pb in water dosed via nursing bottle, 5 cases c) Day 7 d) Day 2, calves as in b), plus Pb in gelatin capsule, 5 cases e) Day 7 f) Day 2, calves fed grain and hay diet, Pb in water, dose via nursing bottle, 4 cases g) Day 7 h) Day 2, as in f), plus Pb in gelatin capsule, 4 cases. 50 kg Holstein-Friesian males, 2-3 wk old. Dose 5 mg/kg/d for 7 d given 2-3 hr after morning feeding. Decreased activity and response to stimuli, trembling, ataxia, pharyngeal paralysis, hypoglossal and generalized paresis. In milk-fed, 3 deaths, 3 with symptoms of Pb poisoning, 3 depressed

BLOOD; BONES; KIDNEYS; LIVER; PANCREAS; SPLEEN; LUNGS; CEREBELLUM; CEREBRUM; BRAIN; NERVES; HEART; MUSCLES; TERRESTRIAL; CATTLE; DELIBERATE EXPOSURE; JUVENILES; LEAD POISONING; COMPARATIVE EVALUATIONS; LEAD; DIETS

Zmudski, J.; Bratton, G.R.; Womac, C.; Rowe, L.D. 1984 Toxicology and Applied Pharmacology 76:490-497

Lead
7439-92-1
Pb
AtW 207.2, MP 327.4 C, BP 1740 C, VP 1.77 mm Hg at 1000 C, 1 mm Hg at 970 C, 10 mm Hg at 1160 C

Cattle
BOS sp.

Tissue	Cases Exposure Route	Range	Mean	General Information
4279 Bone	a) 4 b) 4 c) 10 d) 1 Ingestion	a) 0.18-0.32 mg/kg b) 30.00-75.34 mg/kg c) 32.63-105.81 mg/kg d) Not applicable Wet wt	a) 0.22 +or- 0.07 mg/kg b) 49.02 +or- 14.15 mg/kg c) 54.92 +or- 20.15 mg/kg d) 108.52 mg/kg Wet wt	a) Controls b) 2.7 mg/kg for 20 days c) 5 mg/kg for 7 days d) 20 mg/kg for 5 days Pb acetate doses and exposure times. Animals sacrificed when majority showed signs of intoxication Holstein calves, age 9-12 wk, wt ca 55 kg Depression, hypoglossal paresis, suckling problems, unsteadiness, trunkal ataxia, muscular tremors, generalized seizures, opistotomus, death of respiratory failure. Seizures and death within 48-72 hr at 2.7 mg/kg, 24-36 hr at 5 mg/kg, and 8 hr at 20 mg/kg following hypoglossal paresis. AAS

CATTLE; JUVENILES; NERVES; TEXAS; LEAD POISONING; BLOOD; BONES; BRAIN; HEART; KIDNEYS; LIVER; MUSCLES; PANCREAS; SPINAL CORD; SPLEEN; LEAD; BIOACCUMULATION
Zmudzki, J.; Bratton, G.R.; Womac, C.; Rowe, L. 1983 Bulletin of Environmental Contamination and Toxicology 30:435-441

Tissue	Cases Exposure Route	Range	Mean	General Information
4280 Bone	18 Ingestion	a) 32.86-98.68 mg/kg b) 36.52-90.84 mg/kg c) 3.41-4.72 mg/kg d) 4.07-9.09 mg/kg Wet wt	a) 61.32+/-24.71 mg/kg b) 60.35+/-20.21 mg/kg c) 4.25+/-0.58 mg/kg d) 6.78+/-2.06 mg/kg Wet wt	a) Calves fed milk-replacer diet, Pb in water dosed via nursing bottle, 5 cases b) Diet as in a) Plus Pb in gelatin capsule, 5 cases c) Calves fed grain and hay diet, Pb in water dosed via nursing bottle, 4 cases d) Diet as in c) plus Pb in gelatin capsule, 4 cases Dose 5 mg/kg/d for 7 d given 2-3 hr after morning feeding. 50 kg Holstien-Friesian males, 2-3 wk old. Milk-fed significantly different from grain-fed $p < 0.05$. Decreased activity and response to stimuli, trembling, ataxia, pharyngeal paralysis, hypoglossal and generalized paresis. In milk-fed, 3 deaths, 3 with symptoms of Pb poisoning, 3 depressed

BLOOD; BONES; KIDNEYS; LIVER; PANCREAS; SPLEEN; LUNGS; CEREBELLUM; CEREBRUM; BRAIN; NERVES; HEART; MUSCLES; TERRESTRIAL; CATTLE; DELIBERATE EXPOSURE; JUVENILES; LEAD POISONING; COMPARATIVE EVALUATIONS; LEAD; DIETS
Zmudzki, J.; Bratton, G.R.; Womac, C.; Rowe, L.D. 1984 Toxicology and Applied Pharmacology 76:490-497

Lead
7439-92-1
Pb
AtW 207.2, MP 327.4 C, BP 1740 C, VP 1.77 mm Hg at 1000 C, 1 mm Hg at 970 C, 10 mm Hg at 1160 C

Cattle
BOS sp.

Tissue	Cases Exposure Route	Range	Mean	General Information
4281 Brain	6	Not given	7.08-0.86 nmol/g Wet wt S.E.	Data from toxicology lab records, 1968-1982. Poisoning more common in animals <6 mo old, dairy breeds (0.022/1000) than beef breeds (0.0065/1000), seasonally May-August. Canada, Saskatchewan, Saskatoon Central nervous system abnormalities (blindness, muscle twitching, ataxia, hyperirritability) and gastrointestinal disturbances (anorexia, salivation, rumen stasis). AAS
LEAD POISONING; CATTLE; LEAD; ENVIRONMENTAL EXPOSURE; TERRESTRIAL; CANADA; LIVER; KIDNEYS; BRAIN; BLOOD				
Blakley, B.R. 1984 Veterinary and Human Toxicology 26(6):505-507				

Tissue	Cases Exposure Route	Range	Mean	General Information
4282 Brain	19 Ingestion	a) 0.06-0.10 mg/kg b) 0.54-0.89 mg/kg c) 0.50-1.18 mg/kg d) Not applicable e) 0.05-0.09 mg/kg f) 0.36-0.60 mg/kg g) 0.41-1.09 mg/kg h) Not applicable Wet wt	a) 0.07 +or- 0.02 mg/kg b) 0.66 +or- 0.16 mg/kg c) 0.81 +or- 0.27 mg/kg d) 1.45 mg/kg e) 0.07 +or- 0.02 mg/kg f) 0.51 +or- 0.10 mg/kg g) 0.72 +or- 0.27 mg/kg h) 1.41 mg/kg Wet wt	a) Controls b) 2.7 mg/kg for 20 days c) 5 mg/kg for 7 days d) 20 mg/kg for 5 days e) Controls f) 2.7 mg/kg for 20 days g) 5 mg/kg for 7 days h) 20 mg/kg for 5 days Pb acetate doses and exposure times, a)-d) cerebrum, e)-h) cerebellum. Animals sacrificed when majority showed signs of intoxication. Holstein calves, age 9-12 wk, wt ca. 55 kg Depression, hypoglossal paresis, suckling problems, unsteadiness, truncal ataxia, muscular tremors, generalized seizures, opistotomus, death of respiratory failure. Seizures and death within 48-72 hr at 2.7 mg/kg, 24-36 hr at 5 mg/kg, and 8 hr at 20 mg/kg following hypoglossal paresis. AAS
CATTLE; JUVENILES; NERVES; TEXAS; LEAD POISONING; BLOOD; BONES; BRAIN; HEART; KIDNEYS; LIVER; MUSCLES; PANCREAS; SPINAL CORD; SPLEEN; LEAD; BIOACCUMULATION				
Zmudski, J.; Bratton, G.R.; Womac, C.; Rowe, L. 1983 Bulletin of Environmental Contamination and Toxicology 30:435-441				

Lead
7439-92-1
Pb
AtW 207.2, MP 327.4 C, BP 1740 C, VP 1.77 mm Hg at 1000 C, 1 mm Hg at 970 C, 10 mm Hg at 1160 C

Cattle
BOS sp.

Tissue	Cases Exposure Route	Range	Mean	General Information
4283 Brain	a) 3 b) 4 c) 5 d) 3 e) 4 Ingestion	a) Not given b) Not given c) Not given d) Not given e) Not given	a) 0.1 ug/g b) 3.65 ug/g c) 2.63 ug/g d) 3.37 ug/g e) 2.94 ug/g Dry wt	a) Controls b) 6.25 mg/kg c) 7.81 mg/kg d) 9.77 mg/kg e) 12.21 mg/kg Daily doses. 2 in c) survived 89 and 112 d, others, except controls, died within 24 d. Diarrhea Blindness, death AAS

LIVER; KIDNEYS; SPLEEN; HEART; BRAIN; DELIBERATE EXPOSURE; ADULTS; CATTLE; METAL POISONING; AUTOPSIES; COPPER; LEAD; MANGANESE; IRON; ZINC; METALS; AGRICULTURE; BIOACCUMULATION; DIETS; ANIMAL FEEDS; TERRESTRIAL
Doyle, J.J.; Younger, R.L. 1984 Veterinary and Human Toxicology 26(3):201-204

Tissue	Cases Exposure Route	Range	Mean	General Information
4284 Brain	18 Ingestion	a) 0.59-0.85 mg/kg b) 0.51-0.60 mg/kg c) 0.11-0.27 mg/kg d) 0.12-0.31 mg/kg e) 0.89-0.92 mg/kg f) 0.58-0.93 mg/kg g) 0.14-0.20 mg/kg h) 0.20-0.29 mg/kg Wet wt	a) 0.65+/-0.10 mg/kg b) 0.56+/-0.04 mg/kg c) 0.17+/-0.07 mg/kg d) 0.18+/-0.09 mg/kg e) 0.80+/-0.10 mg/kg f) 0.71+/-0.14 mg/kg g) 0.17+/-0.03 mg/kg h) 0.24+/-0.04 mg/kg Wet wt	a) Cerebellum, calves fed milk-replacer diet, Pb in water dosed via nursing bottle b) Diet as in a) plus Pb in gelatin capsule, 5 cases c) Calves fed grain and hay diet, Pb in water dosed via nursing bottle, 4 cases d) Diet as in c) plus Pb in gelatin capsule, 4 cases e) Cerebrum, calves fed milk-replacer diet, Pb in water dosed via nursing bottle, 5 cases f) Diet as in e) plus Pb in gelatin capsule, 5 cases g) Calves fed grain and hay diet, Pb in water via nursing bottle, 4 cases h) Diet, as in g) Pb in gelatin capsule, 4 cases Dose 5 mg/kg/d for 7 d given 2-3 hr after morning feeding. 50 mg Holstein-Friesian males, 2-3 wk old. Milk-fed significantly different from grain-fed, $p<0.05$. Decreased activity and response to stimuli, trembling, ataxia, pharyngeal paralysis, hypoglossal and generalized paresis. In milk-fed, 3 deaths, 3 with symptoms of Pb poisoning, 3 depressed

BLOOD; BONES; KIDNEYS; LIVER; PANCREAS; SPLEEN; LUNGS; CEREBELLUM; CEREBRUM; BRAIN; NERVES; HEART; MUSCLES; TERRESTRIAL; CATTLE; DELIBERATE EXPOSURE; JUVENILES; LEAD POISONING; COMPARATIVE EVALUATIONS; LEAD; DIETS
Zmudzki, J.; Bratton, G.R.; Womac, C.; Rowe, L.D. 1984 Toxicology and Applied Pharmacology 76:490-497

Lead
7439-92-1
Pb
AtW 207.2, MP 327.4 C, BP 1740 C, VP 1.77 mm Hg at 1000 C, 1 mm Hg at 970 C, 10 mm Hg at 1160 C

Cattle
BOS sp.

Tissue	Cases Exposure Route	Range	Mean	General Information
4266 Heart	a) 4 b) 4 c) 10 d) 1 Ingestion	a) 0.05-0.10 mg/kg b) 0.17-0.53 mg/kg c) 0.31-1.04 mg/kg d) Not applicable Wet wt	a) 0.07 +or- 0.02 mg/kg b) 0.33 +or- 0.18 mg/kg c) 0.59 +or- 0.25 mg/kg d) 1.64 mg/kg Wet wt	a) Controls b) 2.7 mg/kg for 20 days c) 5 mg/kg for 7 days d) 20 mg/kg for 5 days Pb acetate doses and exposure times. Animals sacrificed when majority showed signs of intoxication Holstein calves, age 9-12 wk, wt ca 55 kg Depression, hypoglossal paresis, suckling problems, unsteadiness, trunkal ataxia, muscular tremors, generalized seizures, opistotomus, death of respiratory failure. Seizures and death within 48-72 hr at 2.7 mg/kg, 24-36 hr at 5 mg/kg, and 8 hr at 20 mg/kg following hypoglossal paresis. AAS

CATTLE; JUVENILES; NERVES; TEXAS; LEAD POISONING; BLOOD; BONES; BRAIN; HEART; KIDNEYS; LIVER; MUSCLES; PANCREAS; SPINAL CORD; SPLEEN; LEAD; BIOACCUMULATION
Zmudzki, J.; Bratton, G.R.; Womac, C.; Rowe, L. 1983 Bulletin of Environmental Contamination and Toxicology 30:435-441

Tissue	Cases Exposure Route	Range	Mean	General Information
4266 Heart	a) 3 b) 4 c) 4 d) 3 e) 4 Ingestion	a) Not given b) Not given c) Not given d) Not given e) Not given	a) 0.1 ug/g b) 3.38 ug/g c) 2.65 ug/g d) 2.92 ug/g e) 3.96 ug/g Dry wt	a) Controls b) 6.25 mg/kg c) 7.81 mg/kg d) 9.77 mg/kg e) 12.21 mg/kg Daily doses. 2 in c) survived 89 and 112 d, others, except controls, died within 24 d. Diarrhea Blindness, death AAS

LIVER; KIDNEYS; SPLEEN; HEART; BRAIN; DELIBERATE EXPOSURE; ADULTS; CATTLE; METAL POISONING; AUTOPSIES; COPPER; LEAD; MANGANESE; IRON; ZINC; METALS; AGRICULTURE; BIOACCUMULATION; DIETS; ANIMAL FEEDS; TERRESTRIAL
Doyle, J.J.; Younger, R.L. 1984 Veterinary and Human Toxicology 26(3):201-204

Lead
7439-92-1
Pb
AtW 207.2, MP 327.4 C, BP 1740 C, VP 1.77 mm Hg at 1000 C, 1 mm Hg at 970 C, 10 mm Hg at 1160 C

Cattle
BOS sp.

Tissue	Cases Exposure Route	Range	Mean	General Information
4287 Heart	18 Ingestion	a) 0.31-0.70 mg/kg b) 0.20-0.53 mg/kg c) 0.15-0.03 mg/kg d) 0.16-0.09 mg/kg Wet wt	a) 0.46+/-0.15 mg/kg b) 0.42+/-0.09 mg/kg c) 0.15+/-0.03 mg/kg d) 0.16+/-0.09 mg/kg Wet wt	a) Calves fed milk-replacer diet, Pb in water dosed via nursing bottle, 5 cases b) Diet as in a) Plus Pb in gelatin capsule, 5 cases c) Calves fed grain and hay diet, Pb in water dosed via nursing bottle, 4 cases d) Diet as in c) plus Pb in gelatin capsule, 4 cases Dose 5 mg/kg/d for 7 d given 2-3 hr after morning feeding. 80 kg Holstien-Friesian males, 2-3 wk old. Milk-fed significantly different from grain-fed $p<0.05$. Decreased activity and response to stimuli, trembling, ataxia, pharyngeal paralysis, hypoglossal and generalized paresis. In milk-fed, 3 deaths, 8 with symptoms of Pb poisoning, 3 depressed

BLOOD; BONES; KIDNEYS; LIVER; PANCREAS; SPLEEN; LUNGS; CEREBELLUM; CEREBRUM; BRAIN; NERVES; HEART; MUSCLES; TERRESTRIAL; CATTLE; DELIBERATE EXPOSURE; JUVENILES; LEAD POISONING; COMPARATIVE EVALUATIONS; LEAD; DIETS
Zmudski, J.; Bratton, G.R.; Womac, C.; Rowe, L.D. 1984 Toxicology and Applied Pharmacology 76:490-497

Tissue	Cases Exposure Route	Range	Mean	General Information
4288 Kidney	74	Not given	420+/-36.4 nmol/g Wet wt S.E.	Data from toxicology lab records, 1968-1982. Poisoning more common in animals <6 mo old, dairy breeds (0.022/1000) than beef breeds (0.0065/1000), seasonally May-August. Canada, Saskatchewan, Saskatoon Central nervous system abnormalities (blindness, muscle twitching, ataxia, hyperirritability) and gastrointestinal disturbances (anorexia, salivation, rumen stasis). AAS

LEAD POISONING; CATTLE; LEAD; ENVIRONMENTAL EXPOSURE; TERRESTRIAL; CANADA; LIVER; KIDNEYS; BRAIN; BLOOD
Blakley, B.R. 1984 Veterinary and Human Toxicology 26(6):505-507

Lead
7439-92-1
Pb
AtW 207.2, MP 327.4 C, BP 1740 C, VP 1.77 mm Hg at 1000 C, 1 mm Hg at 970 C, 10 mm Hg at 1160 C
Cattle
BOS sp.

Tissue	Cases Exposure Route	Range	Mean	General Information
4289 Kidney	a) 4 b) 4 c) 10 d) 1 Ingestion	a) 0.09-0.13 mg/kg b) 20.72-90.36 mg/kg c) 51.55-114.34 mg/kg d) Not applicable Wet wt	a) 0.11 +or- 0.02 mg/kg b) 40.49 +or- 32.54 mg/kg c) 88.00 +or- 19.50 mg/kg d) 82.92 mg/kg Wet wt	a) Controls b) 2.7 mg/kg for 20 days c) 5 mg/kg for 7 days d) 20 mg/kg for 5 days Pb acetate doses and exposure times. Animals sacrificed when majority showed signs of intoxication Holstein calves, age 9-12 wk, wt ca 55 kg Depression, hypoglossal paresis, suckling problems, unsteadiness, truncal ataxia, muscular tremors, generalized seizures, opistotomus, death of respiratory failure. Seizures and death within 48-72 hr at 2.7 mg/kg, 24-36 hr at 5 mg/kg, and 8 hr at 20 mg/kg following hypoglossal paresis. AAS

CATTLE; JUVENILES; NERVES; TEXAS; LEAD POISONING; BLOOD; BONES; BRAIN; HEART; KIDNEYS; LIVER; MUSCLES; PANCREAS; SPINAL CORD; SPLEEN; LEAD; BIOACCUMULATION
Zmudski, J.; Bratton, G.R.; Womac, C.; Rowe, L. 1983 Bulletin of Environmental Contamination and Toxicology 30:435-441

Tissue	Cases Exposure Route	Range	Mean	General Information
4290 Kidney	178	<0.02-0.71 mg/kg Wet wt	0.04+cr-0.08 mg/kg Wet wt	From abattoirs in 10 selected 100-sq km areas representing a cross-section of industries. 114 samples below detection limit. Australia, Queensland AAS

CATTLE; AUSTRALIA; KIDNEYS; LIVER; MUSCLES; ARSENIC; CADMIUM ; CHROMIUM; COPPER; LEAD; MERCURY; SELENIUM; ZINC; BIOACCUMULATION; INDUSTRIAL AREAS
Kramer, H.L.; Steiner, J.W.; Vallely, P.J. 1983 Bulletin of Environmental Contamination and Toxicology 30:588-594

Tissue	Cases Exposure Route	Range	Mean	General Information
4291 Kidney	a) 3 b) 4 c) 4 d) 3 e) 4 Ingestion	a) Not given b) Not given c) Not given d) Not given e) Not given	a) 0.1 ug/g b) 320.0 ug/g c) 728.8 ug/g d) 396.7 ug/g e) 361.9 ug/g Dry wt	a) Controls b) 6.25 mg/kg c) 7.81 mg/kg d) 9.77 mg/kg e) 12.21 mg/kg Daily doses. 2 in c) survived 89 and 112 d, others, except controls, died within 24 d. Diarrhea Blindness, death AAS

LIVER; KIDNEYS; SPLEEN; HEART; BRAIN; DELIBERATE EXPOSURE; ADULTS; CATTLE; METAL POISONING; AUTOPSIES; COPPER; LEAD; MANGANESE; IRON; ZINC; METALS; AGRICULTURE; BIOACCUMULATION; DIETS; ANIMAL FEEDS; TERRESTRIAL
Doyle, J.J.; Younger, R.L. 1984 Veterinary and Human Toxicology 26(3):201-204

Lead
7439-92-1
Pb
AtW 207.2, MP 327.4 C, BP 1740 C, VP 1.77 mm Hg at 1000 C, 1 mm Hg at 970 C, 10 mm Hg at 1160 C

Cattle
BOS sp.

Tissue	Cases Exposure Route	Range	Mean	General Information
4292 Kidney	18 Ingestion	a) 71.36+/-157.94 mg/kg b) 57.09-168.56 mg/kg c) 3.04-6.07 mg/kg d) 3.77-8.50 mg/kg Wet wt	a) 128.72+/-35.24 mg/kg b) 119.22+/-45.83 mg/kg c) 3.64+/-0.49 mg/kg d) 6.46+/-1.97 mg/kg Wet wt	a) Calves fed milk-replacer diet, Pb in water dosed via nursing bottle, 5 cases b) Diet as in a) Plus Pb in gelatin capsule, 5 cases c) Calves fed grain and hay diet, Pb in water dosed via nursing bottle, 4 cases d) Diet as in c) plus Pb in gelatin capsule, 4 cases Dose 5 mg/kg/d for 7 d given 2-3 hr after morning feeding. 50 kg Holstein-Friesian males, 2-3 wk old. Milk-fed significantly different from grain-fed $p<0.05$. Decreased activity and response to stimuli, trembling, ataxia, pharyngeal paralysis, hypoglossal and generalized paresis. In milk-fed, 3 deaths, 8 with symptoms of Pb poisoning, 3 depressed

BLOOD; BONES; KIDNEYS; LIVER; PANCREAS; SPLEEN; LUNGS; CEREBELLUM; CEREBRUM; BRAIN; NERVES; HEART; MUSCLES; TERRESTRIAL; CATTLE; DELIBERATE EXPOSURE; JUVENILES; LEAD POISONING; COMPARATIVE EVALUATIONS; LEAD; DIETS
Zmudski, J.; Bratton, G.R.; Womac, C.; Rowe, L.D. 1984 Toxicology and Applied Pharmacology 76:490-497

Tissue	Cases Exposure Route	Range	Mean	General Information
4293 Liver	82	Not given	115+/-18.4 nmol/g Wet wt S.E.	Data from toxicology lab records, 1968-1982. Poisoning more common in animals <6 mo old, dairy breeds (0.022/1000) than beef breeds (0.0065/1000), seasonally May-August. Canada, Saskatchewan, Saskatoon Central nervous system abnormalities (blindness, muscle twitching, ataxia, hyperirritability) and gastrointestinal disturbances (anorexia, salivation, rumen stasis). AAS

LEAD POISONING; CATTLE; LEAD; ENVIRONMENTAL EXPOSURE; TERRESTRIAL; CANADA; LIVER; KIDNEYS; BRAIN; BLOOD
Blakley, B.R. 1984 Veterinary and Human Toxicology 26(6):505-507

Lead
7439-92-1
Pb
AtW 207.2, MP 327.4 C, BP 1740 C, VP 1.77 mm Hg at 1000 C, 1 mm Hg at 970 C, 10 mm Hg at 1160 C

Cattle
BOS sp.

Tissue	Cases Exposure Route	Range	Mean	General Information
4294 Liver	a) 3 b) 4 c) 4 d) 3 e) 4 Ingestion	a) Not given b) Not given c) Not given d) Not given e) Not given	a) 0.1 ug/g b) 97.5 ug/g c) 211.9 ug/g d) 135.8 ug/g e) 121.9 ug/g Dry wt	a) Controls b) 6.25 mg/kg c) 7.81 mg/kg d) 9.77 mg/kg e) 12.21 mg/kg Daily doses. 2 in c) survived 89 and 112 d, others, except controls, died within 24 d. Diarrhea Blindness, death AAS

LIVER; KIDNEYS; SPLEEN; HEART; BRAIN; DELIBERATE EXPOSURE; ADULTS; CATTLE; METAL POISONING; AUTOPSIES; COPPER; LEAD; MANGANESE; IRON; ZINC; METALS; AGRICULTURE; BIOACCUMULATION; DIETS; ANIMAL FEEDS; TERRESTRIAL

Doyle, J.J.; Younger, R.L. 1984 Veterinary and Human Toxicology 26(3):201-204

Tissue	Cases Exposure Route	Range	Mean	General Information
4295 Liver	a) 4 b) 4 c) 10 d) 1 Ingestion	a) 0.09-0.18 mg/kg b) 5.43-29.96 mg/kg c) 15.13-54.98 mg/kg d) Not applicable Wet wt	a) 0.13 +or- 0.04 mg/kg b) 19.00 +or- 11.76 mg/kg c) 30.51 +or- 11.67 mg/kg d) 37.11 mg/kg Wet wt	a) Controls b) 2.7 mg/kg for 20 days c) 5 mg/kg for 7 days d) 20 mg/kg for 5 days Pb acetate doses and exposure times. Animals sacrificed when majority showed signs of intoxication Holstein calves, age 9-12 wk, wt ca 55 kg Depression, hypoglossal paresis, suckling problems, unsteadiness, truncal ataxia, muscular tremors, generalized seizures, opistotomus, death of respiratory failure. Seizures and death within 48-72 hr at 2.7 mg/kg, 24-36 hr at 5 mg/kg, and 6 hr at 20 mg/kg following hypoglossal paresis. AAS

CATTLE; JUVENILES; NERVES; TEXAS; LEAD POISONING; BLOOD; BONES; BRAIN; HEART; KIDNEYS; LIVER; MUSCLES; PANCREAS; SPINAL CORD; SPLEEN; LEAD; BIOACCUMULATION

Zmudzki, J.; Bratton, G.R.; Womac, C.; Rowe, L. 1983 Bulletin of Environmental Contamination and Toxicology 30:435-441

Tissue	Cases Exposure Route	Range	Mean	General Information
4296 Liver	180	<0.02-0.53 mg/kg Wet wt	0.05+or-0.07 mg/kg Wet wt	From abattoirs in 10 selected 100-sq km areas representing a cross-section of industries. 82 samples below detection limit. Australia, Queensland AAS

CATTLE; AUSTRALIA; KIDNEYS; LIVER; MUSCLES; ARSENIC; CADMIUM; CHROMIUM; COPPER; LEAD; MERCURY; SELENIUM; ZINC; BIOACCUMULATION ; INDUSTRIAL AREAS

Kramer, H.L.; Steiner, J.W.; Vallely, P.J. 1983 Bulletin of Environmental Contamination and Toxicology 30:588-594

Lead
7439-92-1
Pb
AtW 207.2, MP 327.4 C, BP 1740 C, VP 1.77 mm Hg at 1000 C, 1 mm Hg at 970 C, 10 mm Hg at 1160 C

Cattle
BOS sp.

Tissue	Cases Exposure Route	Range	Mean	General Information
4297 Liver	18 Ingestion	a) 12.30-73.47 mg/kg b) 41.94-62.80 mg/kg c) 4.53-9.50 mg/kg d) 6.74-17.62 mg/kg Wet wt	a) 34.08+/-22.96 mg/kg b) 49.95+/-7.71 mg/kg c) 6.48+/-2.14 mg/kg d) 11.48+/-5.21 mg/kg Wet wt	a) Calves fed milk-replacer diet, Pb in water dosed via nursing bottle, 5 cases b) Diet as in a) Plus Pb in gelatin capsule, 5 cases c) Calves fed grain and hay diet, Pb in water dosed via nursing bottle, 4 cases d) Diet as in c) plus Pb in gelatin capsule, 4 cases Dose 5 mg/kg/d for 7 d given 2-3 hr after morning feeding. 50 kg Holstien-Priesian males, 2-3 wk old. Milk-fed significantly different from grain-fed $p<0.05$. Decreased activity and response to stimuli, trembling, ataxia, pharyngeal paralysis, hypoglossal and generalized paresis. In milk-fed, 3 deaths, 3 with symptoms of Pb poisoning, 3 depressed
4298 Lung	18 Ingestion	a) 0.86-1.67 mg/kg b) 1.13-1.82 mg/kg c) 0.29-0.41 mg/kg d) 0.23-0.64 mg/kg Wet wt	a) 1.30+/-0.31 mg/kg b) 1.59+/-0.37 mg/kg c) 0.37+/-0.05 mg/kg d) 0.39+/-0.18 mg/kg Wet wt	a) Calves fed milk-replacer diet, Pb in water dosed via nursing bottle, 5 cases b) Diet as in a) Plus Pb in gelatin capsule, 5 cases c) Calves fed grain and hay diet, Pb in water dosed via nursing bottle, 4 cases d) Diet as in c) plus Pb in gelatin capsule, 4 cases Dose 5 mg/kg/d for 7 d given 2-3 hr after morning feeding. 50 kg Holstien-Priesian males, 2-3 wk old. Milk-fed significantly different from grain-fed $p<0.05$. Decreased activity and response to stimuli, trembling, ataxia, pharyngeal paralysis, hypoglossal and generalized paresis. In milk-fed, 3 deaths, 3 with symptoms of Pb poisoning, 3 depressed

BLOOD; BONES; KIDNEYS; LIVER; PANCREAS; SPLEEN; LUNGS; CEREBELLUM; CEREBRUM; BRAIN; NERVES; HEART; MUSCLES; TERRESTRIAL; CATTLE; DELIBERATE EXPOSURE; JUVENILES; LEAD POISONING; COMPARATIVE EVALUATIONS; LEAD; DIETS
Zmudski, J.; Bratton, G.R.; Womac, C.; Rowe, L.D. 1984 Toxicology and Applied Pharmacology 76:490-497

Tissue	Cases Exposure Route	Range	Mean	General Information
4299 Muscle	a) 4 b) 4 c) 10 d) 1 Ingestion	a) 0.05-0.09 mg/kg b) 0.11-0.22 mg/kg c) 0.17-0.40 mg/kg d) Not applicable Wet wt	a) 0.07 +or- 0.02 mg/kg b) 0.17 +or- 0.05 mg/kg c) 0.34 +or- 0.09 mg/kg d) 0.93 mg/kg Wet wt	a) Controls b) 2.7 mg/kg for 20 days c) 5 mg/kg for 7 days d) 20 mg/kg for 5 days Pb acetate doses and exposure times. Animals sacrificed when majority showed signs of intoxication Holstein calves, age 9-12 wk, wt ca 55 kg Depression, hypoglossal paresis, suckling problems, unsteadiness, trunkal ataxia, muscular tremors, generalized seizures, opistotomus, death of respiratory failure. Seizures and death within 48-72 hr at 2.7 mg/kg, 24-36 hr at 5 mg/kg, and 8 hr at 20 mg/kg following hypoglossal paresis. AAS

CATTLE; JUVENILES; NERVES; TEXAS; LEAD POISONING; BLOOD; BONES; BRAIN; HEART; KIDNEYS; LIVER; MUSCLES; PANCREAS; SPINAL CORD; SPLEEN; LEAD; BIOACCUMULATION
Zmudski, J.; Bratton, G.R.; Womac, C.; Rowe, L. 1983 Bulletin of Environmental Contamination and Toxicology 30:435-441

Lead
7439-92-1
Pb
AtW 207.2, MP 327.4 C, BP 1740 C, VP 1.77 mm Hg at 1000 C, 1 mm Hg at 970 C, 10 mm Hg at 1160 C

Cattle
BOS sp.

Tissue	Cases Exposure Route	Range	Mean	General Information
4300 Muscle	181	<0.02-0.06 mg/kg Wet wt	Not given	From abattoirs in 10 selected 100-sq km areas representing a cross-section of industries. 180 samples below detection limit. Australia, Queensland AAS

CATTLE; AUSTRALIA; KIDNEYS; LIVER; MUSCLES; ARSENIC; CADMIUM ; CHROMIUM; COPPER; LEAD; MERCURY; SELENIUM; ZINC; BIOACCUMULATION; INDUSTRIAL AREAS
Kramer, H.L.; Steiner, J.W.; Vallely, P.J. 1983 Bulletin of Environmental Contamination and Toxicology 30:588-594

Tissue	Cases Exposure Route	Range	Mean	General Information
4301 Muscle	18 Ingestion	a) 0.17-0.38 mg/kg b) 0.26-0.49 mg/kg c) 0.10-0.18 mg/kg d) 0.09-0.18 mg/kg Wet wt	a) 0.28+/-0.08 mg/kg b) 0.38+/-0.08 mg/kg c) 0.14+/-0.03 mg/kg d) 0.15+/-0.04 mg/kg Wet wt	a) Calves fed milk-replacer diet, Pb in water dosed via nursing bottle, 5 cases b) Diet as in a) Plus Pb in gelatin capsule, 5 cases c) Calves fed grain and hay diet, Pb in water dosed via nursing bottle, 4 cases d) Diet as in c) plus Pb in gelatin capsule, 4 cases Dose 5 mg/kg/d for 7 d given 2-3 hr after morning feeding. 50 kg Holstien-Friesian males, 2-3 wk old. Milk-fed significantly different from grain-fed $p<0.05$. Decreased activity and response to stimuli, trembling, ataxia, pharyngeal paralysis, hypoglossal and generalized paresis. In milk-fed, 3 deaths, 3 with symptoms of Pb poisoning, 3 depressed

BLOOD; BONES; KIDNEYS; LIVER; PANCREAS; SPLEEN; LUNGS; CEREBELLUM; CEREBRUM; BRAIN; NERVES; HEART; MUSCLES; TERRESTRIAL; CATTLE; DELIBERATE EXPOSURE; JUVENILES; LEAD POISONING; COMPARATIVE EVALUATIONS; LEAD; DIETS
Zmudzki, J.; Bratton, G.R.; Womac, C.; Rowe, L.D. 1984 Toxicology and Applied Pharmacology 76:490-497

Lead

7439-92-1
Pb
AtW 207.2, MP 327.4 C, BP 1740 C, VP 1.77 mm Hg at 1000 C, 1 mm Hg at 970 C, 10 mm Hg at 1160 C

Cattle
BOS sp.

Tissue	Cases Exposure Route	Range	Mean	General Information
4302 Nerve	a) 4 b) 4 c) 10 d) 1 Ingestion	a) 0.04-0.07 mg/kg b) 0.33-0.65 mg/kg c) 0.70-1.41 mg/kg d) Not applicable Wet wt	a) 0.06 +or- 0.01 mg/kg b) 0.53 +or- 0.15 mg/kg c) 0.96 +or- 0.19 mg/kg d) 1.58 mg/kg Wet wt	a) Controls b) 2.7 mg/kg for 20 days c) 5 mg/kg for 7 days d) 20 mg/kg for 5 days Pb acetate doses and exposure times. Sciatic nerve. Animals sacrificed when majority showed signs of intoxication. Holstein calves, age 9-12 wk, wt ca. 55 kg Depression, hypoglossal paresis, suckling problems, unsteadiness, trunkal ataxia, muscular tremors, generalized seizures, opistotomus, death of respiratory failure. Seizures and death within 48-72 hr at 2.7 mg/kg, 24-36 hr at 5 mg/kg, and 8 hr at 20 mg/kg following hypoglossal paresis. AAS

CATTLE; JUVENILES; NERVES; TEXAS; LEAD POISONING; BLOOD; BONES; BRAIN; HEART; KIDNEYS; LIVER; MUSCLES; PANCREAS; SPINAL CORD; SPLEEN; LEAD; BIOACCUMULATION
Zmudski, J.; Bratton, G.R.; Womac, C.; Rowe, L. 1985 Bulletin of Environmental Contamination and Toxicology 30:435-441

Tissue	Cases Exposure Route	Range	Mean	General Information
4303 Nerve	18 Ingestion	a) 0.80-1.05 mg/kg b) 0.72-1.08 mg/kg c) 0.15-0.21 mg/kg d) 0.16-0.33 mg/kg Wet wt	a) 0.89+/-0.09 mg/kg b) 0.87+/-0.18 mg/kg c) 0.19+/-0.03 mg/kg d) 0.24+/-0.07 mg/kg Wet wt	a) Calves fed milk-replacer diet, Pb in water dosed via nursing bottle, 5 cases b) Diet as in a) Plus Pb in gelatin capsule, 5 cases c) Calves fed grain and hay diet, Pb in water dosed via nursing bottle, 4 cases d) Diet as in c) plus Pb in gelatin capsule, 4 cases Sciatic nerve. Dose 5 mg/kg/d for 7 d given 2-3 hr after morning feeding. 50 kg Holstien-Friesian males, 2-3 wk old. Milk-fed significantly different from grain-fed $p < 0.05$. Decreased activity and response to stimuli, trembling, ataxia, pharyngeal paralysis, hypoglossal and generalised paresis. In milk-fed, 3 deaths, 3 with symptoms of Pb poisoning, 3 depressed

BLOOD; BONES; KIDNEYS; LIVER; PANCREAS; SPLEEN; LUNGS; CEREBELLUM; CEREBRUM; BRAIN; NERVES; HEART; MUSCLES; TERRESTRIAL; CATTLE; DELIBERATE EXPOSURE; JUVENILES; LEAD POISONING; COMPARATIVE EVALUATIONS; LEAD; DIETS
Zmudski, J.; Bratton, G.R.; Womac, C.; Rowe, L.D. 1984 Toxicology and Applied Pharmacology 76:490-497

Lead
7439-92-1
Pb
AtW 207.2, MP 327.4 C, BP 1740 C, VP 1.77 mm Hg at 1000 C, 1 mm Hg at 970 C, 10 mm Hg at 1160 C

Cattle
BOS sp.

Tissue	Cases Exposure Route	Range	Mean	General Information
4304 Pancreas	a) 4 b) 4 c) 10 d) 1 Ingestion	a) 0.05-0.09 mg/kg b) 2.09-4.26 mg/kg c) 2.38-12.91 mg/kg d) Not applicable Wet wt	a) 0.07 +or- 0.02 mg/kg b) 3.14 +or- 1.13 mg/kg c) 6.11 +or- 3.42 mg/kg d) 5.66 mg/kg Wet wt	a) Controls b) 2.7 mg/kg for 20 days c) 5 mg/kg for 7 days d) 20 mg/kg for 5 days Pb acetate doses and exposure times. Animals sacrificed when majority showed signs of intoxication Holstein calves, age 9-12 wk, wt ca 55 kg Depression, hypoglossal paresis, suckling problems, unsteadiness, truncal ataxia, muscular tremors, generalized seizures, opistotomus, death of respiratory failure. Seizures and death within 48-72 hr at 2.7 mg/kg, 24-36 hr at 5 mg/kg, and 8 hr at 20 mg/kg following hypoglossal paresis. AAS

CATTLE; JUVENILES; NERVES; TEXAS; LEAD POISONING; BLOOD; BONES; BRAIN; HEART; KIDNEYS; LIVER; MUSCLES; PANCREAS; SPINAL CORD; SPLEEN; LEAD; BIOACCUMULATION

Zmudski, J.; Bratton, G.R.; Womac, C.; Rowe, L. 1983 Bulletin of Environmental Contamination and Toxicology 30:435-441

Tissue	Cases Exposure Route	Range	Mean	General Information
4305 Pancreas	18 Ingestion	a) 3.32-8.20 mg/kg b) 4.41-7.92 mg/kg c) 0.98-1.46 mg/kg d) 0.97-1.77 mg/kg Wet wt	a) 5.81+/-1.84 mg/kg b) 5.34+/-1.50 mg/kg c) 1.20+/-0.22 mg/kg d) 1.41+/-0.33 mg/kg Wet wt	a) Calves fed milk-replacer diet, Pb in water dosed via nursing bottle, 5 cases b) Diet as in a) Plus Pb in gelatin capsule, 5 cases c) Calves fed grain and hay diet, Pb in water dosed via nursing bottle, 4 cases d) Diet as in c) plus Pb in gelatin capsule, 4 cases Dose 5 mg/kg/d for 7 d given 2-3 hr after morning feeding. 50 kg Holstein-Friesian males, 2-3 wk old. Milk-fed significantly different from grain-fed $p<0.05$. Decreased activity and response to stimuli, trembling, ataxia, pharyngeal paralysis, hypoglossal and generalized paresis. In milk-fed, 3 deaths, 3 with symptoms of Pb poisoning, 3 depressed

BLOOD; BONES; KIDNEYS; LIVER; PANCREAS; SPLEEN; LUNGS; CEREBELLUM; CEREBRUM; BRAIN; NERVES; HEART; MUSCLES; TERRESTRIAL; CATTLE; DELIBERATE EXPOSURE; JUVENILES; LEAD POISONING; COMPARATIVE EVALUATIONS; LEAD; DIETS

Zmudski, J.; Bratton, G.R.; Womac, C.; Rowe, L.D. 1984 Toxicology and Applied Pharmacology 76:490-497

Lead

7439-92-1
Pb
AtW 207.2, MP 327.4 C, BP 1740 C, VP 1.77 mm Hg at 1000 C, 1 mm Hg at 970 C, 10 mm Hg at 1160 C

Cattle
BOS sp.

Tissue	Cases Exposure Route	Range	Mean	General Information
4306 Spinal cord	a) 4 b) 4 c) 10 d) 1 Ingestion	a) 0.04-0.07 mg/kg b) 0.18-0.56 mg/kg c) 0.22-0.50 mg/kg d) Not applicable Wet wt	a) 0.06 +or- 0.01 mg/kg b) 0.32 +or- 0.21 mg/kg c) 0.34 +or- 0.10 mg/kg d) 0.82 mg/kg Wet wt	a) Controls b) 2.7 mg/kg for 20 days c) 5 mg/kg for 7 days d) 20 mg/kg for 5 days Pb acetate doses and exposure times. Animals sacrificed when majority showed signs of intoxication Holstein calves, age 9-12 wk, wt ca 55 kg Depression, hypoglossal paresis, suckling problems, unsteadiness, trunkal ataxia, muscular tremors, generalized seizures, opistotomus, death of respiratory failure. Seizures and death within 48-72 hr at 2.7 mg/kg, 24-36 hr at 5 mg/kg, and 8 hr at 20 mg/kg following hypoglossal paresis. AAS
4307 Spleen	a) 4 b) 4 c) 10 d) 1 Ingestion	a) 0.05-0.10 mg/kg b) 0.53-0.87 mg/kg c) 1.07-3.51 mg/kg d) Not applicable Wet wt	a) 0.08 +or- 0.02 mg/kg b) 0.73 +or- 0.17 mg/kg c) 1.67 +or- 0.69 mg/kg d) 2.52 mg/kg Wet wt	a) Controls b) 2.7 mg/kg for 20 days c) 5 mg/kg for 7 days d) 20 mg/kg for 5 days Pb acetate doses and exposure times. Animals sacrificed when majority showed signs of intoxication Holstein calves, age 9-12 wk, wt ca 55 kg Depression, hypoglossal paresis, suckling problems, unsteadiness, trunkal ataxia, muscular tremors, generalized seizures, opistotomus, death of respiratory failure. Seizures and death within 48-72 hr at 2.7 mg/kg, 24-36 hr at 5 mg/kg, and 8 hr at 20 mg/kg following hypoglossal paresis. AAS

CATTLE; JUVENILES; NERVES; TEXAS; LEAD POISONING; BLOOD; BONES; BRAIN; HEART; KIDNEYS; LIVER; MUSCLES; PANCREAS; SPINAL CORD; SPLEEN; LEAD; BIOACCUMULATION
Zmudski, J.; Bratton, G.R.; Womac, C.; Rowe, L. 1983 Bulletin of Environmental Contamination and Toxicology 30:435-441

Tissue	Cases Exposure Route	Range	Mean	General Information
4308 Spleen	a) 3 b) 4 c) 4 d) 3 e) 4 Ingestion	a) Not given b) Not given c) Not given d) Not given e) Not given	a) 0.1 ug/g b) 11.9 ug/g c) 27.5 ug/g d) 30.8 ug/g e) 25.0 ug/g Dry wt	a) Controls b) 6.25 mg/kg c) 7.81 mg/kg d) 9.77 mg/kg e) 12.21 mg/kg Daily doses. 2 in c) survived 89 and 112 d, others, except controls, died within 24 d. Diarrhea Blindness, death AAS

LIVER; KIDNEYS; SPLEEN; HEART; BRAIN; DELIBERATE EXPOSURE; ADULTS; CATTLE; METAL POISONING; AUTOPSIES; COPPER; LEAD; MANGANESE; IRON; ZINC; METALS; AGRICULTURE; BIOACCUMULATION; DIETS; ANIMAL FEEDS; TERRESTRIAL
Doyle, J.J.; Younger, R.L. 1984 Veterinary and Human Toxicology 26(3):201-204

Lead
7439-92-1
Pb
AtW 207.2, MP 327.4 C, BP 1740 C, VP 1.77 mm Hg at 1000 C, 1 mm Hg at 970 C, 10 mm Hg at 1160 C

Cattle
BOS sp.

Tissue	Cases Exposure Route	Range	Mean	General Information
4300 Spleen	18 Ingestion	a) 1.20-2.14 mg/kg b) 1.13-2.58 mg/kg c) 0.28-0.59 mg/kg d) 0.41-0.65 mg/kg Wet wt	a) 1.46+/-0.41 mg/kg b) 1.69+/-0.59 mg/kg c) 0.36+/-0.17 mg/kg d) 0.54+/-0.10 mg/kg Wet wt	a) Calves fed milk-replacer diet, Pb in water dosed via nursing bottle, 5 cases b) Diet as in a) Plus Pb in gelatin capsule, 5 cases c) Calves fed grain and hay diet, Pb in water dosed via nursing bottle, 4 cases d) Diet as in c) plus Pb in gelatin capsule, 4 cases Dose 5 mg/kg/d for 7 d given 2-3 hr after morning feeding. 50 kg Holstien-Friesian males, 2-3 wk old. Milk-fed significantly different from grain-fed $p<0.05$. Decreased activity and response to stimuli, trembling, ataxia, pharyngeal paralysis, hypoglossal and generalised paresis. In milk-fed, 3 deaths, 3 with symptoms of Pb poisoning, 3 depressed

BLOOD; BONES; KIDNEYS; LIVER; PANCREAS; SPLEEN; LUNGS; CEREBELLUM; CEREBRUM; BRAIN; NERVES; HEART; MUSCLES; TERRESTRIAL; CATTLE; DELIBERATE EXPOSURE; JUVENILES; LEAD POISONING; COMPARATIVE EVALUATIONS; LEAD; DIETS
Zmudzki, J.; Bratton, G.R.; Womac, C.; Rowe, L.D. 1984 Toxicology and Applied Pharmacology 76:490-497

Clam
DONAX SERRA

Tissue	Cases Exposure Route	Range	Mean	General Information
4310 Body	251	0.01-0.34 ug/g Wet wt	Not applicable	Collected 8/78-8/79 for national marine pollution monitoring program. Range of means. South Africa

BODY; AQUATIC; ENVIRONMENTAL EXPOSURE; SOUTH AFRICA; METALS; ZINC; CADMIUM; COPPER; LEAD; IRON; MANGANESE; NICKEL; COBALT; CHROMIUM; BIOINDICATORS; BIOLOGICAL MONITORING; BIOACCUMULATION; WATER POLLUTION; MOLLUSKS
Watling, H.R.; Watling, R.J. 1983 Bulletin of Environmental Contamination and Toxicology 31:331-338

Lead
7439-92-1
Pb
AtW 207.2, MP 327.4 C, BP 1740 C, VP 1.77 mm Hg at 1000 C, 1 mm Hg at 970 C, 10 mm Hg at 1160 C

Clam, hard-shell
MERCENARIA MERCENARIA

Tissue	Cases Exposure Route	Range	Mean	General Information
4311 Body	a) 13 b) 10 c) 18 d) 123 e) 38 Ingestion	e) Not detected b) Not detected c) Not detected-trace d) Not detected e) Not detected-0.6 ug/g Wet wt	a) Not detected b) Not detected c) 0.3 ug/g d) Not detected e) Not detected Wet wt	a) 1976 b) 1977 c) 1978 d) 1979 e) 1980 Data include soft-shell clam, MYA ARENARIA. Biological monitoring for heavy metals in shellfish 1976-1980. Residues were well below safe levels. No significant yearly trends. Maryland, Chesapeake Bay area, tributaries AAS

CLAMS; BLUE CRABS; SHELLFISH; CHESAPEAKE BAY; MARYLAND; BIOLOGICAL MONITORING; BIOCONCENTRATION; COPPER; ZINC; LEAD; CADMIUM; ARSENIC; MERCURY; CHROMIUM; WATER POLLUTION; FOOD CONTAMINATION; AQUATIC; MOLLUSKS; ENVIRONMENTAL EXPOSURE
Eisenberg, M.; Topping, J.J. 1984 Journal of Environmental Science and Health B19(7):649-671

Clam, soft-shell
MYA ARENARIA

Tissue	Cases Exposure Route	Range	Mean	General Information
4312 Body	a) 13 b) 10 c) 18 d) 123 e) 38 Ingestion	a) Not detected b) Not detected c) Not detected-trace d) Not detected e) Not detected-0.6 ug/g Wet wt	a) Not detected b) Not detected c) 0.3 ug/g d) Not detected e) Not detected Wet wt	a) 1976 b) 1977 c) 1978 d) 1979 e) 1980 Data include hard-shell clam, MERCENARIA MERCENARIA. Biological monitoring for heavy metals in shellfish 1976-1980. Residues were well below safe levels. No significant yearly trends. Increases in As merit future study. Chesapeake Bay and tributaries. Maryland, Chesapeake Bay area AAS

CLAMS; BLUE CRABS; SHELLFISH; CHESAPEAKE BAY; MARYLAND; BIOLOGICAL MONITORING; BIOCONCENTRATION; COPPER; ZINC; LEAD; CADMIUM; ARSENIC; MERCURY; CHROMIUM; WATER POLLUTION; FOOD CONTAMINATION; AQUATIC; MOLLUSKS; ENVIRONMENTAL EXPOSURE
Eisenberg, M.; Topping, J.J. 1984 Journal of Environmental Science and Health B19(7):649-671

Lead
7439-92-1
Pb
AtW 207.2, MP 327.4 C, BP 1740 C, VP 1.77 mm Hg at 1000 C, 1 mm Hg at 970 C, 10 mm Hg at 1160 C

Crab, blue
CALLINECTES SAPIDUS

Tissue	Cases Exposure Route	Range	Mean	General Information
4313 Body	a) 8 b) 20 Ingestion	a) Not detected b) Not detected-1.2 ug/g Wet wt	a) Not detected b) 0.3 ug/g Wet wt	a) 1979 b) 1980 None collected 1976-1978. Biological monitoring for heavy metals in shellfish 1976-1980. Residues were well below safe levels. No significant yearly trends. Maryland, Chesapeake Bay area tributaries AAS
CLAMS; BLUE CRABS; SHELLFISH; CHESAPEAKE BAY; MARYLAND; BIOLOGICAL MONITORING; BIOCONCENTRATION; COPPER; ZINC; LEAD; CADMIUM; ARSENIC; MERCURY; CHROMIUM; WATER POLLUTION; FOOD CONTAMINATION; AQUATIC; MOLLUSKS; ENVIRONMENTAL EXPOSURE				
Eisenberg, M.; Topping, J.J. 1984 Journal of Environmental Science and Health B19(7):649-671				

Crayfish
ORCONECTES NAIS

Tissue	Cases Exposure Route	Range	Mean	General Information
4314 Body	54	a) 27+/-10-121+/-164 ug/g b) 12+/-2-69+/-23 ug/g c) 25+/-26-42+/-15 ug/g d) 6+/-2-25+/-5 ug/g e) 6+/-4-13+/-3 ug/g f) 10+/-4-12+/-7 ug/g g) Not given h) Not given i) Not given	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given g) 0.8+/-1.1 ug/g h) 12+/-7 ug/g i) 50+/-60 ug/g	a) Small, 0.05-0.5 g, direct exposure, 9 cases b) Medium, >0.5-2.0 g, 9 cases c) Large, >2.0-5 g, 9 cases d) Small, indirect exposure, 9 cases e) Medium, 9 cases f) Large, 9 cases g) Unexposed controls h) Direct exposure, mean of 27 cases i) Indirect exposure, mean of 27 cases 1mgPb/g sediment. Indirect exposure-on mesh 1 cm above sediment. Direct exposure, in contact with sediment. Treated for 50 d. Missouri AAS
BODY; EXOSKELETON; EXUVIA; GREEN GLAND; MUSCLES; GILLS; HEPATOPANCREAS; CRAYFISH; AQUATIC; DELIBERATE EXPOSURE; ENVIRONMENTAL EXPOSURE; MISSOURI; LEAD; BIOACCUMULATION; WATER POLLUTION; PARTICULATES; SOILS; GASTROINTESTINAL SYSTEM				
Knowlton, M.F.; Boyle, T.P.; Jones, J.R. 1983 Archives of Environmental Contamination and Toxicology 12:535-541				

Tissue	Cases Exposure Route	Range	Mean	General Information
4315 Body, whole	a) 20 b) 17	a) Not given b) Not given	a) 13.92+/-1.60 ug/g b) 6.89+/-3.05 ug/g	a) All males exposed to elevated sediment metal levels for 14 days b) All females Significantly different, a) and b). Washington, Seattle, Lake Washington and Lake Union ICP
MUSCLES; ORGANS; EXOSKELETON; CRAYFISH; AQUATIC; ENVIRONMENTAL EXPOSURE; WASHINGTON; LEAD; CADMIUM; MERCURY; COPPER; METALS; BIOACCUMULATION; BIOMAGNIFICATION; BIOLOGICAL MONITORING; FOOD CONTAMINATION; SEWAGE; WATER POLLUTION				
Stinson, M.D.; Eaton, D.L. 1983 Archives of Environmental Contamination and Toxicology 12:693-700				

Lead
7439-92-1
Pb
AtW 207.2, MP 327.4 C, BP 1740 C, VP 1.77 mm Hg at 1000 C, 1 mm Hg at 970 C, 10 mm Hg at 1160 C

Crayfish
ORCONECTES NAIS

Tissue	Cases Exposure Route	Range	Mean	General Information
4316 Digestive tract	a) 2 b) 3	a) 18.3-34.4 ug/g b) 1.3-14.6 ug/g	a) Not given b) Not given	a) Intermolt, collected 2 wk after 1st molt b) Postmolt, collected within 24 hr of 2nd molt Indirectly exposed to 1 mg Pb/g sediment on mesh 1 cm above sediment for up to 11 wk. Missouri AAS

BODY; EXOSKELETON; EXUVIA; GREEN GLAND; MUSCLES; GILLS; HEPATOPANCREAS; CRAYFISH; AQUATIC; DELIBERATE EXPOSURE; ENVIRONMENTAL EXPOSURE; MISSOURI; LEAD; BIOACCUMULATION; WATER POLLUTION; PARTICULATES; SOILS; GASTROINTESTINAL SYSTEM
Knowlton, M.F.; Boyle, T.P.; Jones, J.R. 1983 Archives of Environmental Contamination and Toxicology 12:535-541

Tissue	Cases Exposure Route	Range	Mean	General Information
4317 Exoskeleton	37	a) Not applicable b) Not applicable c) Not applicable d) Not applicable e) Not applicable f) Not applicable	a) 10 ug/g b) 15 ug/g c) 18 ug/g d) 17 ug/g e) 17.49+/-13.62 ug/g f) 8.84+/-6.61 ug/g	a) Laboratory controls, 10 cases b) Confined near storm drain outfall for freeway runoff, 7 cases c) Retail market sample, 12 cases d) Near combined sewer overflow outfall, 8 cases e) All males, 20 cases f) All females, 17 cases Exposed for 14 days. Estimated from graph. Significantly different, e) and f). Washington, Seattle, Lake Washington and Lake Union ICP

MUSCLES; ORGANS; EXOSKELETON; CRAYFISH; AQUATIC; ENVIRONMENTAL EXPOSURE; WASHINGTON; LEAD; CADMIUM; MERCURY; COPPER; METALS; BIOACCUMULATION; BIOMAGNIFICATION; BIOLOGICAL MONITORING; FOOD CONTAMINATION; SEWAGE; WATER POLLUTION
Stinson, M.D.; Eaton, D.L. 1983 Archives of Environmental Contamination and Toxicology 12:693-700

Tissue	Cases Exposure Route	Range	Mean	General Information
4318 Exoskeleton	a) 2 b) 3	a) 4.3-26.0 ug/g b) 1.1-1.7 ug/g	a) Not given b) Not given	a) Intermolt, collected 2 wk after 1st molt, 79% of body total b) Postmolt, collected within 24 hr of 2nd molt, 3% of total Indirectly exposed to 1 mg Pb/g sediment on mesh 1 cm above sediment for up to 11 wk. Missouri AAS
4319 Exuvia	a) 7 b) 11 c) 3 d) 12	a) Not given b) Not given c) 12.1-16.8 ug/g d) Not given	a) 36+/-26 ug/g b) 158+/-85 ug/g c) Not given d) 1.8+/-0.8 ug/g	a) Indirect exposure, on mesh 1 cm above sediment b) Direct exposure, in contact with sediment c) Postmolt, collected within 24 hr of 2nd molt during indirect exposure d) Unexposed controls Sediment contained 1 mg Pb/g sediment. a) and b) exposed 50 d. c) exposed up to 11 wk Missouri AAS

(next page)

Lead
7439-92-1
Pb
AtW 207.2, MP 327.4 C, BP 1740 C, VP 1.77 mm Hg at 1000 C, 1 mm Hg at 970 C, 10 mm Hg at 1160 C
Crayfish
ORCONECTES NAIS

(continued)

Tissue	Cases Exposure Route	Range	Mean	General Information
4320 Gills	a) 2 b) 3	a) 6.2-15.1 ug/g b) 0.6-2.3 ug/g	a) Not given b) Not given	a) Intermolt, collected 2 wk after 1st molt b) Postmolt, collected within 24 hr of 2nd molt Indirectly exposed to 1 mg Pb/g sediment on mesh 1 cm above sediment for up to 11 wk. Missouri AAS
4321 Green gland	a) 2 b) 3	a) 17.6-30.0 ug/g b) 10.4-35.5 ug/g	a) Not given b) Not given	a) Intermolt, collected 2 wk after 1st molt b) Postmolt, collected within 24 hr of 2nd molt Exposed indirectly, on mesh 1 cm above sediment, 1 mg Pb/g sediment for up to 11 wk. Missouri AAS
4322 Hepatopancreas	a) 2 b) 3 c) 9	a) 8.9-22.7 ug/g b) 5.2-6.1 ug/g c) Not given	a) Not given b) Not given c) 0.4+/-0.3 ug/g	a) Intermolt, collected 2 wk after 1st molt b) Postmolt, collected within 24 hr of 2nd molt c) Unexposed controls a) and b) indirectly exposed to 1 mg Pb/g sediment on mesh 1 cm above sediment for up to 11 wk. Missouri AAS

BODY; EXOSKELETON; EXUVIA; GREEN GLAND; MUSCLES; GILLS; HEPATOPANCREAS; CRAYFISH; AQUATIC; DELIBERATE EXPOSURE; ENVIRONMENTAL EXPOSURE; MISSOURI; LEAD; BIOACCUMULATION; WATER POLLUTION; PARTICULATES; SOILS; GASTROINTESTINAL SYSTEM

Knowlton, M.F.; Boyle, T.P.; Jones, J.R. 1983 Archives of Environmental Contamination and Toxicology 12:535-541

Tissue	Cases Exposure Route	Range	Mean	General Information
4323 Muscle	37	a) Not applicable b) Not applicable c) Not applicable d) Not applicable e) Not applicable f) Not applicable	a) 1.0 ug/g b) 1.0 ug/g c) 0.98 ug/g d) 2.0 ug/g e) 1.252+/-0.742 ug/g f) 0.628+/-0.201 ug/g	a) Laboratory controls, 10 cases b) Confined near storm drain outfall for freeway runoff, 7 cases c) Retail market sample, 12 cases d) Near combined sewer overflow outfall, 8 cases e) All males, 20 cases f) All females, 17 cases Exposed for 14 days. Estimated from graph. Significantly different, e) and f). Washington, Seattle, Lake Washington and Lake Union ICP

MUSCLES; ORGANS; EXOSKELETON; CRAYFISH; AQUATIC; ENVIRONMENTAL EXPOSURE; WASHINGTON; LEAD; CADMIUM; MERCURY; COPPER; METALS; BIOACCUMULATION; BIOMAGNIFICATION; BIOLOGICAL MONITORING; FOOD CONTAMINATION; SEWAGE; WATER POLLUTION

Stinson, M.D.; Eaton, D.L. 1983 Archives of Environmental Contamination and Toxicology 12:693-700

Lead
7439-92-1
Pb
AtW 207.2, MP 327.4 C, BP 1740 C, VP 1.77 mm Hg at 1000 C, 1 mm Hg at 970 C, 10 mm Hg at 1160 C

Crayfish
ORCONECTES NAIS

Tissue	Cases Exposure Route	Range	Mean	General Information
4324 Muscle	a) 2 b) 3	a) 0.8-4.6 ug/g b) 0.4-1 ug/g	a) Not given b) Not given	a) Intermolt, collected 2 wk after 1st molt b) Postmolt, collected within 24 hr of 2nd molt Indirectly exposed to 1 mg Pb/g sediment on mesh 1 cm above sediment for up to 11 wk. Missouri AAS
BODY; EXOSKELETON; EXUVIA; GREEN GLAND; MUSCLES; GILLS; HEPATOPANCREAS; CRAYFISH; AQUATIC; DELIBERATE EXPOSURE; ENVIRONMENTAL EXPOSURE; MISSOURI; LEAD; BIOACCUMULATION; WATER POLLUTION; PARTICULATES; SOILS; GASTROINTESTINAL SYSTEM Knowlton, M.F.; Boyle, T.P.; Jones, J.R. 1983 Archives of Environmental Contamination and Toxicology 12:535-541				

Tissue	Cases Exposure Route	Range	Mean	General Information
4325 Organs	a) 10 b) 7 c) 12 d) 8	a) Not applicable b) Not applicable c) Not applicable d) Not applicable	a) 200 ug/g b) 100 ug/g c) 200 ug/g d) 180 ug/g	a) Laboratory controls b) Confined near storm drain outfall for freeway runoff c) Retail market sample d) Near combined sewer overflow outfall Exposed for 14 days. Estimated from graph. Significantly different, b) from a) and c). Washington, Seattle, Lake Washington and Lake Union ICP
MUSCLES; ORGANS; EXOSKELETON; CRAYFISH; AQUATIC; ENVIRONMENTAL EXPOSURE; WASHINGTON; LEAD; CADMIUM; MERCURY; COPPER; METALS; BIOACCUMULATION; BIOMAGNIFICATION; BIOLOGICAL MONITORING; FOOD CONTAMINATION; SEWAGE; WATER POLLUTION Stinson, M.D.; Eaton, D.L. 1983 Archives of Environmental Contamination and Toxicology 12:693-700				

Dace, blacknose
RHINICTHYS ATRATULUS

Tissue	Cases Exposure Route	Range	Mean	General Information
4326 Body	19	9.9-26.0 ug/g Dry wt	15.5 ug/g Dry wt Median	Highway-contaminated stream. No positive correlation with total length. Sediment association influenced inter-specific variation. Virginia, Back Creek AAS
BODY; AQUATIC; VIRGINIA; CADMIUM; LEAD; NICKEL; ZINC; METALS; AIR POLLUTION; WATER POLLUTION; BIOACCUMULATION; BIOLOGICAL MONITORING; FISHES; BONES Ney, J.J.; Van Hassel, J.H. 1983 Archives of Environmental Contamination and Toxicology 12:701-706				

Lead
7439-92-1
Pb
AtW 207.2, MP 327.4 C, BP 1740 C, VP 1.77 mm Hg at 1000 C, 1 mm Hg at 970 C, 10 mm Hg at 1160 C

Darter, fantail
ETHEOSTOMA FLABELLARE

Tissue	Cases Exposure Route	Range	Mean	General Information
4327 Body	19	11.9-28.8 ug/g Dry wt	19.5 ug/g Dry wt Median	Highway-contaminated stream. No positive correlation with total length. Sediment association influenced inter-specific variation. Virginia, Back Creek AAS
BODY; AQUATIC; VIRGINIA; CADMIUM; LEAD; NICKEL; ZINC; METALS; AIR POLLUTION; WATER POLLUTION; BIOACCUMULATION; BIOLOGICAL MONITORING; FISHES; BONES				
Ney, J.J.; Van Hassel, J.H. 1983 Archives of Environmental Contamination and Toxicology 12:701-706				

Dove, ringed turtle
STREPTOPELIA RISORIA

Tissue	Cases Exposure Route	Range	Mean	General Information
4328 Testis	a) 1 b) 3 c) 2 Ingestion	a) Not given b) 0.04-0.11 ug/g c) 1.84-3.56 ug/g Wet wt	a) 1.22 ug/g b) Not given c) Not given Wet wt	a) 9 days after 4 100-mg pellets b) Cold-exposed controls c) Cold-exposed for 9 days after 4 100-mg pellets. Lethargy, appetite depression Testes small, yellow, with degenerated tubules, hypertrophied interstitial cells. AAS; AVS
BIRDS; TESTES; ADULTS; LEAD POISONING; LEAD				
Veit, H.P.; Kendall, R.J.; Scanlon, P.F. 1983 Avian Disease 27(2):442-452				

Duck, black
ANAS RUBRIPES

Tissue	Cases Exposure Route	Range	Mean	General Information
4329 Blood, whole	6 Ingestion	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given g) Not given	a) 0.68+/-0.03 ppm b) 0.70+/-0.06 ppm c) 0.66+/-0.05 ppm d) 0.69+/-0.04 ppm e) 0.68+/-0.05 ppm f) 0.65+/-0.10 ppm g) 0.60+/-0.13 ppm Wet wt	a) Controls, fresh b) Formalin, fresh c) Formalin, 2 mo d) Formalin, 8 mo e) Frozen, 2 mo f) Frozen, 8 mo g) Formalin-frozen, 8 mo Methods of preservation and times of analysis. Dose was 1 number 4 lead shot. Birds sacrificed 24 hrs after dose. Maryland AAS
BLOOD; DELIBERATE EXPOSURE; ADULTS; METAL POISONING; LEAD POISONING; MEASUREMENT METHODS; MERCURY; CADMIUM; LEAD; DDE; METALS; ACCIDENTAL POISONING; ANIMAL POPULATIONS; BIOACCUMULATION; PESTICIDE RESIDUES; AQUATIC; WATERFOWL				
Wiemeyer, S.N.; Moore, J.F.; Mulhern, B.M. 1984 Bulletin of Environmental Contamination and Toxicology 33:525-532				

Lead
7439-92-1
Pb
AtW 207.2, MP 327.4 C, BP 1740 C, VP 1.77 mm Hg at 1000 C, 1 mm Hg at 970 C, 10 mm Hg at 1160 C

Duck, black
ANAS RUBRIPES

Tissue	Cases Exposure Route	Range	Mean	General Information
4330 Bone	a) 5 b) 4 c) 4 d) 5	a) Not given b) 12.9+/-2.06-78.9 ppm c) 21.8+/-9.00-75.4+/-48.6 ppm d) 32.1-104.7+/-6.75 ppm S.E.	a) 8.5+/-8.14 ppm b) 29.4+/-16.56 ppm c) 48.6+/-25.43 ppm d) 63.8+/-18.54 ppm S.E.	a) Controls b) Ingested 2 shot c) 5 shot d) 5 shot repeated dose Trapped 3/80 Fed natural foods, No. 6 shot placed on gizzards through plastic tube for 35 d. Rangeslof means. Connecticut; Massachusetts Green diarrhea, lethargy, ataxia, muscular paralysis AAS

BONES; LIVER; WATERFOWL; AQUATIC; DELIBERATE EXPOSURE; ENVIRONMENTAL EXPOSURE; LEAD; ANIMAL FEEDS

Chasko, G.G.; Hoehn, T.R.; Howell-Heller, P. 1984 Bulletin of Environmental Contamination and Toxicology 32:417-428

Tissue	Cases Exposure Route	Range	Mean	General Information
4331 Bone	24 Ingestion	0.8-19.5 ug/g Dry wt	5.6 ug/g Dry wt	80% average recovery, data not corrected for recovery. Collected winters of 1976-77, 1979-80. Extensive interspecies variation. Spent shot contributed to body burden. Possible sublethal effects. High levels linked to herbivorous diet. Chesapeake Bay AAS
4332 Kidney	18 Ingestion	<0.5-35.8 ug/g Dry wt	17.6 ug/g Dry wt	Collected winters of 1976-77, 1979-80. Extensive interspecies variation. Spent shot contributed to body burden. Possible sublethal effects. Chesapeake Bay AAS

AQUATIC; CADMIUM; LEAD; COPPER; ZINC; LIVER; KIDNEYS; BONES; BIOLOGICAL MONITORING; UNITED STATES; BIOACCUMULATION; BIRDS; TERRESTRIAL; WATERFOWL; DUCKS; ENVIRONMENTAL EXPOSURE; DIETS; METALS

Giulio, R.T.; Scanlon, P.F. 1984 Environmental Pollution (Series A) 35:29-48

Lead
7439-92-1
Pb
AtW 207.2, MP 327.4 C, BP 1740 C, VP 1.77 mm Hg at 1000 C, 1 mm Hg at 970 C, 10 mm Hg at 1160 C

Duck, black
ANAS RUBRIPES

Tissue	Cases Exposure Route	Range	Mean	General Information
4333 Liver	a) 5 b) 4 c) 4 d) 5	a) Not given b) 0.6+/-0.09-20.9 ppm c) 0.4+/-0.95-28.5+/-10.33 ppm d) 5.1+/-0.40-36.0+/-5.98 ppm S.E.	a) 0.1+/-0.01 ppm b) 5.6+/-5.09 ppm c) 14.5+/-0.16 ppm d) 18.0+/-7.46 ppm S.E.	a) Controls b) Ingested 2 shot c) 5 shot d) 5 shot repeated dose Trapped [illegible]/80 Fed natural foods, No. 6 shot placed on gizzards through plastic tube for 35 d. Range of means. Connecticut; Massachusetts AAS
BONES; LIVER; WATERFOWL; AQUATIC; DELIBERATE EXPOSURE; ENVIRONMENTAL EXPOSURE; LEAD; ANIMAL FEEDS				
Chasko, G.G.; Hoehn, T.R.; Howell-Heller, P. 1984 Bulletin of Environmental Contamination and Toxicology 32:417-428				

Duck, long-tailed
CLANGULA HYEMALIS

Tissue	Cases Exposure Route	Range	Mean	General Information
4334 Feathers	a) 28 b) 15 c) 6	a) 3.2-7.0 mg/kg b) 0.7-1.5 mg/kg c) 3.7-5.1 mg/kg Dry wt	a) 5.2 +or- 0.8 mg/kg b) 1.2 +or- 0.2 mg/kg c) 4.4 +or- 0.7 mg/kg Dry wt	a) Males b) Males, oiled c) Females Collected 1980-81. Composite samples Poland, Gdansk Bay AAS
4335 Heart	a) 50 b) 40	a) 0.091-0.12 mg/kg b) 0.11-0.75 mg/kg Wet wt	a) 0.10 +or- 0.01 mg/kg b) 0.43 +or- 0.32 mg/kg Wet wt	a) Males b) Females Collected 1980-81. Composite samples Poland, Gdansk Bay AAS
4336 Liver	a) 50 b) 40	a) 0.063-0.19 mg/kg b) 0.062-0.20 mg/kg Wet wt	a) 0.13 +or- 0.02 mg/kg b) 0.14 +or- 0.03 mg/kg Wet wt	a) Males b) Females Collected 1980-81. Composite samples Poland, Gdansk Bay AAS
4337 Muscle	90	a) 0.015-0.040 mg/kg b) 0.014-0.11 mg/kg c) 0.021-0.11 mg/kg d) 0.074-0.23 mg/kg Wet wt	a) 0.028 +or- 0.02 mg/kg b) 0.043 +or- 0.05 mg/kg c) 0.065 +or- 0.034 mg/kg d) 0.13 +or- 0.05 mg/kg Wet wt	a) Males, breast b) Females, breast c) Males, leg d) Females, leg Collected 1980-81. Composite samples Poland, Gdansk Bay AAS

(next page)

Lead
7439-92-1
Pb
AtW 207.2, MP 327.4 C, BP 1740 C, VP 1.77 mm Hg at 1000 C, 1 mm Hg at 970 C, 10 mm Hg at 1160 C

Duck, long-tailed
CLANGULA HYEMALIS

(continued)

Tissue	Cases Exposure Route	Range	Mean	General Information
4338 Stomach	a) 50 b) 40	a) 0.020-0.090 mg/kg b) 0.077-0.14 mg/kg Wet wt	a) 0.069 +or- 0.020 mg/kg b) 0.11 +or- 0.03 mg/kg Wet wt	a) Males b) Females Collected 1980-81. Composite samples Poland, Gdansk Bay AAS
POLAND; BIRDS; IRON; ZINC; MANGANESE; COPPER; LEAD; CADMIUM; COBALT; NICKEL; BIOACCUMULATION; LIVER; MUSCLES; HEART; STOMACH; FEATHERS; AQUATIC; WATERFOWL; ENVIRONMENTAL EXPOSURE				
Szefer, P.; Falandysz, J. 1983 Science of the Total Environment 29:269-276				

Duck, mallard
ANAS PLATYRHYNCHOS

Tissue	Cases Exposure Route	Range	Mean	General Information
4339 Bone	a) 8 b) 8 c) 7 d) 6 e) 8 f) 8 g) 8 Ingestion	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given g) Not given	a) 0.9+/-0.6 ug/g b) 0.5+/-0.2 ug/g c) 0.5+/-0.1 ug/g d) 0.8+/-0.1 ug/g e) 5.3+/-0.8 ug/g f) 0.6+/-0.1 ug/g g) 3.6+/-0.4 Dry wt S.E.	a) Controls b) 10 ug Cd/g diet c) 100 ug Cd/g diet d) 10 ug Pb/g diet e) 100 ug Pb/g diet f) 5 ug Cd+5 ug Pb/g diet g) 50 ug Cd+50 ug/g diet Juveniles 128 d old. Fed as Cl salts in 42+/-1 d. Concentrates in bone to same degree as in liver. e) significantly greater than others. g) significantly greater than all but e). Virginia, Blacksburg AAS
KIDNEYS; LIVER; BONES; CADMIUM; LEAD; COPPER; ZINC; DIETS; BIOACCUMULATION; BIRDS; WATERFOWL; DELIBERATE EXPOSURE; AQUATIC; JUVENILES				
Di Giulio, R.T.; Scanlon, P.F. 1984 Science of the Total Environment 39:103-110				

Lead
7439-92-1
Pb
AtW 207.2, MP 327.4 C, BP 1740 C, VP 1.77 mm Hg at 1000 C, 1 mm Hg at 970 C, 10 mm Hg at 1160 C

Duck, mallard
ANAS PLATYRHYNCHOS

Tissue	Cases Exposure Route	Range	Mean	General Information
4340 Bone	a) 5 b) 6 c) 3 d) 5	a) Not given b) 29.6+/-5.25-35.6 ppm c) 33.0+/-6.72-100.0+/-8.00 ppm d) 50.6+/-15.61-123.8+/-6.75 ppm S.E.	a) 17.3+/-4.70 ppm b) 30.6+/-4.40 ppm c) 55.3+/-14.90 ppm d) 79.9+/-20.00 ppm S.E.	a) Controls b) Ingested 2 shot c) 5 shot d) 5 shot repeated dose Trapped 3/80 Fed natural foods, No. 6 shot placed on gizzards through plastic tube for 35 d. Range of means. Connecticut; Massachusetts AAS
BONES; LIVER; WATERFOWL; AQUATIC; DELIBERATE EXPOSURE; ENVIRONMENTAL EXPOSURE; LEAD; ANIMAL FEEDS				
Chasko, G.G.; Hoehn, T.R.; Howell-Heller, P. 1984 Bulletin of Environmental Contamination and Toxicology 32:417-428				

Tissue	Cases Exposure Route	Range	Mean	General Information
4341 Bone	32 Ingestion	<0.5-246.8 ug/g Dry wt	22.1 ug/g Dry wt	80% average recovery, data not corrected for recovery. Collected winters of 1976-77, 1979-80. Spent shot contributed to body burden. Possible sublethal effects. Extensive interspecies variation. High levels linked to herbivorous diet. Chesapeake Bay AAS
AQUATIC; CADMIUM; LEAD; COPPER; ZINC; LIVER; KIDNEYS; BONES; BIOLOGICAL MONITORING; UNITED STATES; BIOACCUMULATION; BIRDS; TERRESTRIAL; WATERFOWL; DUCKS; ENVIRONMENTAL EXPOSURE; DIETS; METALS				
Giulio, R.T.; Scanlon, P.F. 1984 Environmental Pollution (Series A) 35:29-48				

Tissue	Cases Exposure Route	Range	Mean	General Information
4342 Kidney	a) 8 b) 8 c) 7 d) 6 e) 8 f) 8 g) 8 Ingestion	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given g) Not given	a) <0.5 ug/g b) <0.5 ug/g c) <0.5 ug/g d) 4.1+/-0.5 ug/g e) 22.5+/-1.5 ug/g f) 3.1+/-0.3 ug/g g) 16.1+/-1.4 ug/g Dry wt S.E.	a) Controls b) 10 ug Cd/g diet c) 100 ug Cd/g diet d) 10 ug Pb/g diet e) 100 ug Pb/g diet f) 5 ug Cd+5 ug Pb/g diet g) 50 ug Cd+50 ug/g diet Juveniles 128 d old. Fed as Cl salts in 42+/-1 d. Pb concentrates 16X less than Cd at same intake level. e) significantly greater than others. g) significantly greater than all but e). Virginia, Blacksburg AAS
KIDNEYS; LIVER; BONES; CADMIUM; LEAD; COPPER; ZINC; DIETS; BIOACCUMULATION; BIRDS; WATERFOWL; DELIBERATE EXPOSURE; AQUATIC; JUVENILES				
Di Giulio, R.T.; Scanlon, P.F. 1984 Science of the Total Environment 39:103-110				

Lead
7439-92-1
Pb
AtW 207.2, MP 327.4 C, BP 1740 C, VP 1.77 mm Hg at 1000 C, 1 mm Hg at 970 C, 10 mm Hg at 1160 C

Duck, mallard
ANAS PLATYRHYNCHOS

Tissue	Cases Exposure Route	Range	Mean	General Information
4343 Kidney	25 Ingestion	<0.5-36.7 ug/g Dry wt	5.7 ug/g Dry wt	Collected winters of 1976-77, 1979-80. Spent shot contributed to body burden. Possible sublethal effects. Extensive interspecies variation. Chesapeake Bay AAS

AQUATIC; CADMIUM; LEAD; COPPER; ZINC; LIVER; KIDNEYS; BONES; BIOLOGICAL MONITORING; UNITED STATES; BIOACCUMULATION; BIRDS; TERRESTRIAL; WATERFOWL; DUCKS; ENVIRONMENTAL EXPOSURE; DIETS; METALS
Giulio, R.T.; Scanlon, P.F. 1984 Environmental Pollution (Series A) 35:29-48

Tissue	Cases Exposure Route	Range	Mean	General Information
4344 Liver	a) 8 b) 8 c) 7 d) 6 e) 8 f) 8 g) 8 Ingestion	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given g) Not given	a) <0.5 ug/g b) <0.5 ug/g c) <0.5 ug/g d) <0.7+/-0.3 ug/g e) 7.2+/-0.9 ug/g f) <0.5 ug/g g) 3.8+/-0.6 ug/g Dry wt S.E.	a) Controls b) 10 ug Cd/g diet c) 100 ug Cd/g diet d) 10 ug Pb/g diet e) 100 ug Pb/g diet f) 5 ug Cd+5 ug Pb/g diet g) 50 ug Cd+50 ug/g diet Juveniles 128 d old. Fed as Cl salts in 42+/-1 d. Pb concentrates 15X less than Cd at same intake level. Pb concentrates in liver as in bone. e) significantly greater than others Virginia, Blacksburg AAS

KIDNEYS; LIVER; BONES; CADMIUM; LEAD; COPPER; ZINC; DIETS; BIOACCUMULATION; BIRDS; WATERFOWL; DELIBERATE EXPOSURE; AQUATIC; JUVENILES
Di Giulio, R.T.; Scanlon, P.F. 1984 Science of the Total Environment 39:103-110

Tissue	Cases Exposure Route	Range	Mean	General Information
4345 Liver	a) 5 b) 6 c) 6 d) 5	a) Not given b) 4.6+/-1.14-5.1 ppm c) 5.1+/-1.60-54.0+/-0.05 ppm d) 18.6+/-9.38-58.8+/-2.40 ppm S.E.	a) 0.2+/-0.06 ppm b) 4.7+/-0.93 ppm c) 21.4+/-10.50 ppm d) 34.7+/-11.12 ppm S.E.	a) Controls b) Ingested 2 shot c) 5 shot d) 5 shot repeated dose Trapped 3/80 Fed natural foods, No. 6 shot placed on gizzards through plastic tube for 35 d. Range of means. Connecticut; Massachusetts AAS

BONES; LIVER; WATERFOWL; AQUATIC; DELIBERATE EXPOSURE; ENVIRONMENTAL EXPOSURE; LEAD; ANIMAL FEEDS
Chasko, G.G.; Hoehn, T.R.; Howell-Heller, P. 1984 Bulletin of Environmental Contamination and Toxicology 32:417-428

Lead
7439-92-1
Pb
AtW 207.2, MP 327.4 C, BP 1740 C, VP 1.77 mm Hg at 1000 C, 1 mm Hg at 970 C, 10 mm Hg at 1160 C

Duck, ring-necked
AYTHYA COLLARIS

Tissue	Cases Exposure Route	Range	Mean	General Information
4346 Bone	23 Ingestion	1.2-77.9 ug/g Dry wt	24.2 ug/g Dry wt	80% average recovery, data not corrected for recovery. Collected winters of 1976-77, 1979-80. High levels linked to herbivorous diet. Spent shot contributed to body burden. Chesapeake Bay AAS
4347 Kidney	8 Ingestion	<0.5-82.2 ug/g Dry wt	5.2 ug/g Dry wt	Collected winters of 1976-77, 1979-80. Extensive interspecies variation. Spent shot contributed to body burden. Possible sublethal effects. Chesapeake Bay AAS

AQUATIC; CADMIUM; LEAD; COPPER; ZINC; LIVER; KIDNEYS; BONES; BIOLOGICAL MONITORING; UNITED STATES; BIOACCUMULATION; BIRDS; TERRESTRIAL; WATERFOWL; DUCKS; ENVIRONMENTAL EXPOSURE; DIETS; METALS

Giulio, R.T.; Scanlon, P.F. 1984 Environmental Pollution (Series A) 35:29-48

Duck, ruddy
OXYURA JAMAICENSIS

Tissue	Cases Exposure Route	Range	Mean	General Information
4348 Bone	20 Ingestion	<0.5-43.4 ug/g Dry wt	10.7 ug/g Dry wt	80% average recovery data not corrected for recovery. Collected winters of 1976-77, 1979-80. Extensive interspecies variations. Chesapeake Bay AAS
4349 Kidney	20 Ingestion	<0.5-33.6 ug/g Dry wt	3.9 ug/g Dry wt	Collected winters of 1976-77, 1979-80. Extensive interspecies variations. Chesapeake Bay AAS

AQUATIC; CADMIUM; LEAD; COPPER; ZINC; LIVER; KIDNEYS; BONES; BIOLOGICAL MONITORING; UNITED STATES; BIOACCUMULATION; BIRDS; TERRESTRIAL; WATERFOWL; DUCKS; ENVIRONMENTAL EXPOSURE; DIETS; METALS

Giulio, R.T.; Scanlon, P.F. 1984 Environmental Pollution (Series A) 35:29-48

Eagle, booted
HIERAETUS PENNATUS

Tissue	Cases Exposure Route	Range	Mean	General Information
4350 Eggs	a) 1 b) 3 Ingestion	a) Not given b) Not given	a) 0.330 ppm b) 0.653 ppm Wet wt	a) Collected 1981 b) 1983. Spain AAS

EGGS; ENVIRONMENTAL EXPOSURE; SPAIN; ADULTS; METAL POISONING; DDE; DDD; DDT; DIELDRIN; HEXACHLOROCYCLOHEXANE; HEPTACHLOR EPOXIDE; ALDRIN; POLYCHLORINATED BIPHENYLS; MERCURY; LEAD; CADMIUM; COPPER; ZINC; BIOACCUMULATION; BIOCONCENTRATION; HEALTH HAZARDS; PESTICIDE RESIDUES; BIRDS; TERRESTRIAL

Gonzales, M.J.; Hernandez, L.M.; Rico, M.C.; Baluja, G. 1984 Journal of Environmental Health and Science

Lead
7439-92-1
Pb
AtW 207.2, MP 327.4 C, BP 1740 C, VP 1.77 mm Hg at 1000 C, 1 mm Hg at 970 C, 10 mm Hg at 1160 C

Eagle, imperial
AQUILA HELIACA

Tissue	Cases Exposure Route	Range	Mean	General Information
4351 Eggs	a) 6 b) 3 c) 3 d) 10 Ingestion	a) Not given b) Not given c) Not given d) Not given	a) 0.905 ppm b) 0.673 ppm c) 0.708 ppm d) 0.502 ppm Wet wt	a) Collected 1980 b) 1981 c) 1982 d) 1983. Spain AAS

EGGS; ENVIRONMENTAL EXPOSURE; SPAIN; ADULTS; METAL POISONING; DDE; DDD; DDT; DIELDRIN; HEXACHLOROCYCLOHEXANE; HEPTACHLOR EPOXIDE; ALDRIN; POLYCHLORINATED BIPHENYLS; MERCURY; LEAD; CADMIUM; COPPER; ZINC; BIOACCUMULATION; BIOCONCENTRATION; HEALTH HAZARDS; PESTICIDE RESIDUES; BIRDS; TERRESTRIAL

Gonzales, M.J.; Hernandez, L.M.; Rico, M.C.; Baluja, G. 1984 Journal of Environmental Health and Science

Earthworm
LUMBRICUS RUBELLUS

Tissue	Cases Exposure Route	Range	Mean	General Information
4352 Body		9-670 mg/kg	Not given	From 31 sampling sites 1-15 km from zinc smelter. Soil level 14-430 mg/kg. Mean dry wt 86+/-28 mg Netherlands, Eindhoven, S.E., Dutch Kempen region AAS

WORMS; LEAD; ZINC; NETHERLANDS; BODY; SMELTERS; SOILS; CADMIUM; COPPER; TERRESTRIAL; ENVIRONMENTAL EXPOSURE

Ma, W.; Edelman, T.; van Beersum, I.; Jans, T. 1983 Bulletin of Environmental Contamination and Toxicology 30:424-427

Tissue	Cases Exposure Route	Range	Mean	General Information
4353 Body, whole	37	0.18-2.70 ug/wet g	0.87+/-0.55 ug/wet g	Accumulation dependent upon age or exposure time. Small worms had faster uptake and excretion than large ones. Correlations of metal levels, body length or weight were significantly negative. Total burden increased with body length to 15 cm, thereafter was constant. Japan, Matsuyama City, Tsubaki shrine AAS

IRON; MANGANESE; ZINC; COPPER; LEAD; NICKEL; COBALT; ARSENIC; MERCURY; CADMIUM; BIOACCUMULATION; SOILS; BIOINDICATORS; LAND POLLUTION; EARTHWORMS; BODY; TERRESTRIAL; ENVIRONMENTAL EXPOSURE; JAPAN; METALS; BIOLOGICAL MONITORING

Honda, K.; Nasu, T.; Tatsukawa, R. 1984 Archives of Environmental Contamination and Toxicology 13:427-432

Lead
7439-92-1
Pb
AtW 207.2, MP 327.4 C, BP 1740 C, VP 1./7 mm Hg at 1000 C, 1 mm Hg at 970 C, 10 mm Hg at 1160 C

Eel
ANGUILLA ANGUILLA

Tissue	Cases Exposure Route	Range	Mean	General Information
4354 Blood	7 Ingestion	0.12-0.15 mg/g Dry wt	Not given	Ullswater Hotel, nearest mine drainage Natural diet of snails (5.6 mg/g dry wt). No significant biomagnification. England, Cumbria, Ullswater AAS
4355 Liver	7 Ingestion	0.05-0.29 mg/g Dry wt	Not given	Ullswater Hotel, nearest mine drainage Natural diet of snails (5.6 mg/g dry wt). No significant biomagnification. England, Cumbria, Ullswater AAS
4356 Muscle	7 Ingestion	<0.01-0.04 mg/g Dry wt	Not given	Ullswater Hotel, nearest mine drainage Natural diet of snails (5.6 mg/g dry wt). No significant biomagnification. England, Cumbria, Ullswater AAS

SNAILS; AQUATIC; EELS; LEAD; BIOACCUMULATION; SHELL; MUSCLES; FOOT; BODY; BLOOD; LIVER; ENVIRONMENTAL EXPOSURE; DELIBERATE EXPOSURE; UNITED KINGDOM; WATER POLLUTION; INDUSTRIAL POLLUTION; MINING

Everard, M.; Denny, P. 1984 Environmental Pollution (Series A) 35:299-314

Fish
ETROPUS sp.

Tissue	Cases Exposure Route	Range	Mean	General Information
4357 Muscle	Ingestion	a) 0.91-2.42 ug/g b) Not given c) Not given Wet wt	a) Not given b) 3.55 ug/g c) 3.0 ug/g Wet wt	a) Outfall area, received industrial discharges, range of means b) Methanum site, received industrial discharges c) Chowara site, upstream from ore processing industries. Levels below safe limits. India, Periyar River

MUSCLES; BIOLOGICAL MONITORING; INDIA; INDUSTRIAL POLLUTION; WATER POLLUTION; BIOCONCENTRATION; FOOD CONTAMINATION; LEAD; LEAD-210; PRAWNS; SHRIMP; OYSTERS; AQUATIC; ENVIRONMENTAL EXPOSURE; FISHES; RADIONUCLIDES

Borkar, M.D.; Paul, A.C.; Pillai, K.C. 1984 Science of the Total Environment 34:279-288

Lead
7439-92-1
Pb
AtW 207.2, MP 327.4 C, BP 1740 C, VP 1.77 mm Hg at 1000 C, 1 mm Hg at 970 C, 10 mm Hg at 1160 C

Gadwall
ANAS STREPERA

Tissue	Cases Exposure Route	Range	Mean	General Information
4358 Bone	14 Ingestion	0.8-30.3 ug/g Dry wt	5.7 ug/g Dry wt	80% average recovery, data not corrected for recovery. Collected winters of 1976-77, 1979-80. High levels linked to herbivorous diet. Spent shot contributed to body burden. Chesapeake Bay AAS
4359 Kidney	9 Ingestion	0.9-44.4 ug/g Dry wt	7.0 ug/g Dry wt	Collected winters of 1976-77, 1979-80. Extensive interspecies variations. Spent shot contributed to body burden. Possible sublethal effects. Chesapeake Bay AAS

AQUATIC; CADMIUM; LEAD; COPPER; ZINC; LIVER; KIDNEYS; BONES; BIOLOGICAL MONITORING; UNITED STATES; BIOACCUMULATION; BIRDS; TERRESTRIAL; WATERFOWL; DUCKS; ENVIRONMENTAL EXPOSURE; DIETS; METALS
Giulio, R.T.; Scanlon, P.F. 1984 Environmental Pollution (Series A) 35:29-48

Hake
MERLUCIUS MERLUCIUS

Tissue	Cases Exposure Route	Range	Mean	General Information
4360 Muscle	a) 2 b) 2 c) 2	a) Not given b) Not given c) Not given	a) 760 ug/kg b) 950 ug/kg c) 320 ug/kg Wet wt	a) Thermaikos Gulf b) Kavala Gulf c) Strymonikos Gulf Collected 1980-82. Length 19-25 cm, wt 86-197 g Greece, North Aegean Sea AAS

GREECE; BODY; MUSCLES; CADMIUM; LEAD; MERCURY; BIOACCUMULATION; FISHES; WATER POLLUTION; MOLLUSKS
Vasilikiotis, G.; Fytianos, K.; Zotou, A. 1983 Chemosphere 12(1):75-81

Herring
CLUPEA sp.

Tissue	Cases Exposure Route	Range	Mean	General Information
4361 Muscle	Ingestion	a) Not given b) Not given	a) 0.72 ug/g b) 0.32 ug/g Wet wt	a) Vazhakulam b) Ernakulam Upstream from monazite processing plant. Levels below safe limits. India, Periyar River

MUSCLES; BIOLOGICAL MONITORING; INDIA; INDUSTRIAL POLLUTION; WATER POLLUTION; BIOCONCENTRATION; FOOD CONTAMINATION; LEAD; LEAD-210; PRAWNS; SHRIMP; OYSTERS; AQUATIC; ENVIRONMENTAL EXPOSURE; FISHES; RADIONUCLIDES
Borkar, M.D.; Paul, A.C.; Pillai, K.C. 1984 Science of the Total Environment 34:279-288

Lead
7439-92-1
Pb
AtW 207.2, MP 327.4 C, BP 1740 C, VP 1.77 mm Hg at 1000 C, 1 mm Hg at 970 C, 10 mm Hg at 1160 C

Hobby
FALCO SUBBUTEO

Tissue	Cases Exposure Route	Range	Mean	General Information
4362 Eggs	a) 3 b) 4 Ingestion	a) Not given b) Not given	a) 0.646 ppm b) 0.397 ppm Wet wt	a) Collected 1982 b) 1983. Spain AAS

EGGS; ENVIRONMENTAL EXPOSURE; SPAIN; ADULTS; METAL POISONING; DDE; DDD; DDT; DIELDRIN; HEXACHLOROCYCLOHEXANE; HEPTACHLOR EPOXIDE; ALDRIN; POLYCHLORINATED BIPHENYLS; MERCURY; LEAD; CADMIUM, COPPER; ZINC; BIOACCUMULATION; BIOCONCENTRATION; HEALTH HAZARDS; PESTICIDE RESIDUES; BIRDS; TERRESTRIAL

Gonzales, M.J.; Hernandes, L.M.; Rico, M.C.; Baluja, G. 1984 Journal of Environmental Health and Science

Horse

Tissue	Cases Exposure Route	Range	Mean	General Information
4363 Kidney	a) 20 b) 1 Ingestion	a) Not applicable b) Not applicable	a) 4.83+/-2.85 umol/kg b) 38.64 umol/kg	a) Normal, controls b) Pastured in an industrial area Pasture contained elevated Zn and Fe, moderately elevated Pb, normal Cu. Excessive Zn intake caused hypocuprosis. Australia Severe lameness, stiffened gait. Multiple bony enlargements of legs and joints, degenerative arthroses of shoulder and hip joints, histological evidence consistent with osteoporosis.
4364 Liver	a) 20 b) 1 Ingestion	a) Not applicable b) Not applicable	a) 3.86+/-2.22 umol/kg b) 48.30 umol/kg	a) Normal, controls b) Pastured in an industrial area Pasture contained elevated Zn and Fe, moderately elevated Pb, normal Cu. Excessive Zn intake caused hypocuprosis. Australia Severe lameness, stiffened gait. Multiple bony enlargements of legs and joints, degenerative arthroses of shoulder and hip joints, histological evidence consistent with osteoporosis.

LIVER; KIDNEYS; BLOOD SERUM; BLOOD PLASMA; ENVIRONMENTAL EXPOSURE; HORSES; TERRESTRIAL; METAL POISONING; AUSTRALIA; BONE DISEASES; AUTOPSIES; JUVENILES; COPPER; ZINC; LEAD; IRON; FOOD CONTAMINATION; BIOACCUMULATION; HEALTH HAZARDS; LAND POLLUTION

Eamens, G.J.; Macadam, J.F.; Laing, E.A. 1984 Australian Veterinary Journal 61(7):205-207

Lead
7439-92-1
Pb
AtW 207.2, MP 327.4 C, BP 1740 C, VP 1.77 mm Hg at 1000 C, 1 mm Hg at 970 C, 10 mm Hg at 1160 C

Kestrel
FALCO SPARVERIUS

Tissue	Cases Exposure Route	Range	Mean	General Information
4365 Blood	a) 24 b) 28 c) 28 Ingestion	a) 0.54-3.00 ppm b) 0.39-14.00 ppm c) 0.37-33.00 ppm Dry wt	a) 1.38 ppm b) 2.37 ppm c) 3.94 ppm Dry wt	a) Controls, detected in 5 b) 10 ppm for 5-7 mo, detected in 8 c) 50 ppm for 5-7 mo, detected in 14 Pen-reared, age 1-6 yr Significant reduction of blood delta-aminolevulinic acid dehydratase activity. AAS
BIRDS; MARYLAND; BLOOD; LIVER; COMPARATIVE EVALUATIONS; LEAD; DIETS				
Franson, J.C.; Sileo, L.; Pattee, O.H.; Moore, J.F. 1983 Journal of Wildlife Diseases 19(2):110-113				

Tissue	Cases Exposure Route	Range	Mean	General Information
4366 Liver	a) 15 b) 15 c) 15 d) 15 e) 16 f) 14 Ingestion	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given	a) 0.43 +or- 0.00 ppm b) 0.33 +or- 0.05 ppm c) 0.67 +or- 0.76 ppm d) 0.76 +or- 0.65 ppm e) 1.30 +or- 1.00 ppm f) 2.40 +or- 1.40 ppm Dry wt	a) Controls, males b) Controls, females c) 10 ppm for 5-7 mo, males d) 10 ppm for 5-7 mo, females e) 50 ppm, males f) 50 ppm, females Pen-reared, age 1-6 yr Significant reduction of blood delta-aminolevulinic acid dehydratase activity.
BIRDS; MARYLAND ; BLOOD; LIVER; COMPARATIVE EVALUATIONS; LEAD; DIETS				
Franson, J.C.; Sileo, L.; Pattee, O.H.; Moore, J.F. 1983 Journal of Wildlife Diseases 19(2):110-113				

Kestrel, American
FALCO SPARVERIUS

Tissue	Cases Exposure Route	Range	Mean	General Information
4367 Blood	a) 10 b) 8 c) 8 d) 13 Ingestion	a) Not detected-0.52 ppm b) Not detected-0.75 c) 0.58-2.25 d) Not detected-9.39 ppm Wet wt	a) 0.33 ppm b) 0.43 ppm c) 1.13 ppm d) 1.69 ppm Wet wt	a) Control 0.45 ppm b) 119.7 ppm c) 212.05 ppm d) 448.3 ppm Dry wt in diet fed 60 d Diet consisted of chickens fed lead acetate. 1-2 yr old. No sex or age differences. Significant differences among treatment groups. Marland, Laurel
DIETS; LEAD; BIRDS; POISONING; BLOOD; KIDNEYS; LIVER; MUSCLES; BRAIN; TERRESTRIAL; ENVIRONMENTAL EXPOSURE				
Custer, T.W.; Franson, J.C.; Pattee, O.H. 1984 Journal of Wildlife Diseases 20(1):39-43				

Lead
7439-92-1
Pb
AtW 207.2, MP 327.4 C, BP 1740 C, VP 1.77 mm Hg at 1000 C, 1 mm Hg at 970 C, 10 mm Hg at 1160 C

Kestrel, American
FALCO SPARVERIUS

Tissue	Cases Exposure Route	Range	Mean	General Information
4368 Bone	a) 5 b) 6 c) 5 Ingestion	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given	a) 3.5+/-2.4 ppm b) 4.4+/-1.6 ppm c) 13.5+/-5.2 ppm d) 3.3+/-2.4 ppm e) 9.1+/-6.0 ppm f) 62.0+/-25.0 ppm Dry wt	a) Controls, no Pb in diet, humeri b) 10 ppm Pb in diet c) [illegible] Pb in diet d) Controls, no Pb in diet, Tibias e) 10 ppm Pb in diet f) 50 ppm Pb in diet Significant difference ($p < 0.05$) b) and c), e) and f). Maintained on controlled diets 5-7 mo. Maryland, Laurel, Patuxent Wildlife Refuge
BONES; LIVER; SHELL; TERRESTRIAL; DELIBERATE EXPOSURE; MARYLAND; LEAD; ANIMAL POPULATIONS; BIOINDICATORS; FOOD CONTAMINATION; BIRDS				
Pattee, O.H. 1984 Archives of Environmental Contamination and Toxicology 13:29-34				

Tissue	Cases Exposure Route	Range	Mean	General Information
4369 Bone	a) 10 b) 8 c) 8 d) 14 Ingestion	a) Not detected-8.31 ppm b) 5.68-10.98 ppm c) 11.25-38.89 ppm d) 14.05-23.25 ppm Dry wt	a) 1.67 ppm b) 7.84 ppm c) 16.60 ppm d) 18.44 ppm Dry wt	a) Control 0.45 ppm b) 119.7 ppm c) 212.05 ppm d) 448.3 ppm Dry wt in diet fed 60 d Diet consisted of chickens fed lead acetate. 1-2 yr old. No sex or age differences. Significant differences among treatment groups. Maryland, Laurel
4370 Brain	a) 10 b) 8 c) 8 d) 13 Ingestion	a) Not detected-10.0 ppm b) Not detected-2.07 ppm c) Not detected-2.44 ppm d) 1.07-10.16 ppm Dry wt	a) 0.70 ppm b) 0.66 ppm c) 1.06 ppm d) 2.35 ppm Dry wt	a) Control 0.45 ppm b) 119.7 ppm c) 212.05 ppm d) 448.3 ppm Dry wt in diet fed 60 d Diet consisted of chickens fed lead acetate. 1-2 yr old. No sex or age differences. Significant differences among treatment groups. Marland, Laurel
4371 Kidney	a) 10 b) 8 c) 8 d) 14 Ingestion	a) Not detected-12.35 ppm b) Not detected-16.50 ppm c) 8.21-12.08 ppm d) 10.29-25.36 Dry wt	a) 1.35 ppm b) 7.47 ppm c) 9.89 ppm d) 15.22 ppm Dry wt	a) Control 0.45 ppm b) 119.7 ppm c) 212.05 ppm d) 448.3 ppm Dry wt in diet fed 60 d Diet consisted of chickens fed lead acetate. 1-2 yr old. No sex or age differences. Significant differences among treatment groups. Maryland, Laurel No morality, weight loss, or anemia Concentration in tissues related to amounts ingested

(next page)

Lead
7439-92-1
Pb
AtW 207.2, MP 327.4 C, BP 1740 C, VP 1.77 mm Hg at 1000 C, 1 mm Hg at 970 C, 10 mm Hg at 1160 C

Kestrel, American
FALCO SPARVERIUS

(continued)

Tissue	Cases Exposure Route	Range	Mean	General Information
4372 Liver	a) 10 b) 8 c) 8 d) 14 Ingestion	a) Not detected-4.38 ppm b) 3.33-5.69 ppm c) 5.10-9.77 ppm d) 6.90-15.83 ppm Dry wt	a) 0.42 ppm b) 4.47 ppm c) 6.77 ppm d) 10.59 ppm Dry wt	a) Control 0.45 ppm b) 119.7 ppm c) 212.05 ppm d) 448.3 ppm Dry wt in diet fed 60 d. Diet consisted of chickens fed lead acetate. 1-2 yr old. No sex or age differences. No significant treatment effects. Maryland, Laurel
DIETS; LEAD; BIRDS; POISONING; BLOOD; KIDNEYS; LIVER; MUSCLES; BRAIN; TERRESTRIAL; ENVIRONMENTAL EXPOSURE				
Custer, T.W.; Franson, J.C.; Pattee, O.H. 1984 Journal of Wildlife Diseases 20(1):39-43				

Tissue	Cases Exposure Route	Range	Mean	General Information
4373 Liver	a) 15 b) 15 c) 16 d) 15 e) 15 f) 14 Ingestion	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given	a) 0.43+/-0.09 ppm b) 0.67+/-0.76 ppm c) 1.3+/-1.00 ppm d) 0.33+/-0.05 ppm e) 0.76+/-0.65 ppm f) 2.4+/-1.40 ppm Dry wt	a) Controls, males, no Pb in diet b) 10 ppm in diet c) 50 ppm in diet d) Controls, females, no Pb in diet e) 10 ppm in diet f) 50 ppm in diet Significant differences ($p < 0.05$): a) and b) from c), d) and e) from f). Maintained on controlled diets 5-7 wk. Maryland, Laurel, Patuxent Wildlife Refuge
BONES; LIVER; SHELL; TERRESTRIAL; DELIBERATE EXPOSURE; MARYLAND; LEAD; ANIMAL POPULATIONS; BIOINDICATORS; FOOD CONTAMINATION; BIRDS				
Pattee, O.H. 1984 Archives of Environmental Contamination and Toxicology 13:29-34				

Tissue	Cases Exposure Route	Range	Mean	General Information
4374 Muscle	a) 10 b) 8 c) 8 d) 14 Ingestion	a) Not detected-3.93 ppm b) Not detected-0.35 ppm c) Not detected-2.0 ppm d) 0.26-1.45 ppm Dry wt	a) 0.20 ppm b) 0.19 ppm c) 0.33 ppm d) 0.48 ppm Dry wt	a) Control 0.45 ppm b) 119.7 ppm c) 212.05 ppm d) 448.3 ppm Dry wt in diet fed 60 d. Diet consisted of chickens fed lead acetate. 1-2 yr old. No sex or age differences. No significant treatment effects. Maryland, Laurel
DIETS; LEAD; BIRDS; POISONING; BLOOD; KIDNEYS; LIVER; MUSCLES; BRAIN; TERRESTRIAL; ENVIRONMENTAL EXPOSURE				
Custer, T.W.; Franson, J.C.; Pattee, O.H. 1984 Journal of Wildlife Diseases 20(1):39-43				

Lead

7439-92-1
Pb
AtW 207.2, MP 327.4 C, BP 1740 C, VP 1.77 mm Hg at 1000 C, 1 mm Hg at 970 C, 10 mm Hg at 1160 C

Kestrel, American
FALCO SPARVERIUS

Tissue	Cases Exposure Route	Range	Mean	General Information
4375 Shell	a) 15 b) 14 c) 15 Ingestion	a) Not given b) Not given c) Not given	a) 1.2+/-1.7 ppm b) 1.7+/-2.7 ppm c) 0.6+/-0.3 ppm Dry wt	a) Controls, no Pb in diet b) 10 ppm Pb in diet c) 50 ppm Pb in diet Maintained on controlled diets 5-7 mo. Maryland, Laurel, Patuxent Wildlife Refuge

BONES; LIVER; SHELL; TERRESTRIAL; DELIBERATE EXPOSURE; MARYLAND; LEAD; ANIMAL POPULATIONS; BIOINDICATORS; FOOD CONTAMINATION; BIRDS

Pattee, O.H. 1984 Archives of Environmental Contamination and Toxicology 13:29-34

Kite, black
MILVUS MIGRANS

Tissue	Cases Exposure Route	Range	Mean	General Information
4376 Eggs	a) 2 b) 5 c) 4 Ingestion	a) Not given b) Not given c) Not given	a) 0.997 ppm b) 0.664 ppm c) 0.677 ppm Wet wt	a) Collected 1981 b) 1982 c) 1983. Spain AAS

EGGS; ENVIRONMENTAL EXPOSURE; SPAIN; ADULTS; METAL POISONING; DDE; DDD; DDT; DIELDRIN; HEXACHLOROCYCLOHEXANE; HEPTACHLOR EPOXIDE; ALDRIN; POLYCHLORINATED BIPHENYLS; MERCURY; LEAD; CADMIUM; COPPER; ZINC; BIOACCUMULATION; BIOCONCENTRATION; HEALTH HAZARDS; PESTICIDE RESIDUES; BIRDS; TERRESTRIAL

Gonzales, M.J.; Hernandes, L.M.; Rico, M.C.; Baluja, G. 1984 Journal of Environmental Health and Science

Kite, red
MILVUS MILVUS

Tissue	Cases Exposure Route	Range	Mean	General Information
4377 Eggs	a) 4 b) 4 c) 2 Ingestion	a) Not given b) Not given c) Not given	a) 0.630 ppm b) 0.569 ppm c) 1.275 ppm Wet wt	a) Collected 1981 b) 1982 c) 1983. Spain AAS

EGGS; ENVIRONMENTAL EXPCSURE; SPAIN; ADULTS; METAL POISONING; DDE; DDD; DDT; DIELDRIN; HEXACHLOROCYCLOHEXANE; HEPTACHLOR EPOXIDE; ALDRIN; POLYCHLORINATED BIPHENYLS; MERCURY; LEAD; CADMIUM; COPPER; ZINC; BIOACCUMULATION; BIOCONCENTRATION; HEALTH HAZARDS; PESTICIDE RESIDUES; BIRDS; TERRESTRIAL

Gonzales, M.J.; Hernandes, L.M.; Rico, M.C.; Baluja, G. 1984 Journal of Environmental Health and Science

Lead
7439-92-1
Pb
AtW 207.2, MP 327.4 C, BP 1740 C, VP 1.77 mm Hg at 1000 C, 1 mm Hg at 970 C, 10 mm Hg at 1160 C

Mayfly
EPHEMEROPTERA

Tissue	Cases Exposure Route	Range	Mean	General Information
4378 Body		a) 600-800 ppm b) 0-600 ppm c) 500-900 ppm d) 600-800 ppm	a) Not given b) Not given c) Not given d) Not given	a) Controls during dry weather b) Controls during wet weather c) Station 2, which drains half of business district, during wet weather d) Station 3, which receives total cumulative runoff load from the city, during dry weather Additional data for Station 1, a control with an artificial substrate, and three weather regimes: dry, rain and snow/thaw (wet= rain and snow/thaw) Estimated from graph Massachusetts, Greenfield, Green River AAS

URBAN AREAS; WATER POLLUTION; BIOINDICATORS; COPPER; CADMIUM; ZINC; LEAD; INSECTS; AQUATIC; BENTHOS; BODY; MASSACHUSETTS; ENVIRONMENTAL EXPOSURE
Medeiros, C.; LeBlanc, R.; Coler, R.A. 1983 Environmental Toxicology and Chemistry 2:119-126

Mollusk
PERNA PERNA

Tissue	Cases Exposure Route	Range	Mean	General Information
4379 Body	10	a) Not given b) Not given	a) 0.22 +or- 0.05 ug/g b) 2.93 +or- 0.64 ug/g Wet wt	a) Controls b) 100 ug/l for 3 wk South Africa, Knysna Heads AAS

MOLLUSKS; BIOACCUMULATION; BIOINDICATORS; WATER POLLUTION; CADMIUM; CHROMIUM; COBALT; COPPER; LEAD; NICKEL; ZINC; BODY; SOUTH AFRICA
Watling, H.R. 1983 Bulletin of Environmental Contamination and Toxicology 30:317-322

Mouse, deer
PEROMYSCUS MANICULATUS

Tissue	Cases Exposure Route	Range	Mean	General Information
4380 Bone	a) 13 b) 23 c) 19 Ingestion Inhalation	a) 0.23-13.61 mg/kg b) 18.86-78.96 mg/kg c) 1.84-4.96 mg/kg Wet wt	a) 2.11+/-3.78 mg/kg b) Not applicable c) Not applicable Wet wt	a) Control, Thomson-Fulton Sand Prairie b) 100-400 m, Ayers Sand Prairie, range of means c) 500-800 m, Ayers Sand Prairie, range of means Femur. Distance from boundary of reclamation plant. b) higher levels than a), c). Parallel soil and grass levels. Illinois, Savanna, Ayers Sand Prairie Nature Preserve, Thomson-Fulton Sand Prairie Nature Preserve AAS

(next page)

Lead
7439-92-1
Pb
AtW 207.2, MP 327.4 C, BP 1740 C, VP 1.77 mm Hg at 1000 C, 1 mm Hg at 970 C, 10 mm Hg at 1160 C

Mouse, deer
PEROMYSCUS MANICULATUS

(continued)

Tissue	Cases Exposure Route	Range	Mean	General Information
4381 Kidney	a) 22 b) 40 c) 51 Ingestion Inhalation	a) 0.41-38.07 mg/kg b) 11.00-23.86 mg/kg c) 1.43-3.12 mg/kg Wet wt	a) 2.98+/-8.03 mg/kg b) Not applicable c) Not applicable Wet wt	a) Control, Thomson-Fulton Sand Prairie b) 100-300 m transect, Ayers Sand Prairie, range of means c) 400-1000 m transect, Ayers Sand Prairie, range of means Distance from boundary of reclamation plant. b) higher levels than a), c). Parallel soil and grass levels. Illinois, Savanna, Ayers Sand Prairie Nature Preserve, Thomson-Fulton Sand Prairie Nature Preserve Acid-fast (Ziehl-Neelsen) eosinophilic intranuclear inclusions within renal tubular epithelial cells occasionally present at higher Pb levels. AAS
4382 Liver	a) 22 b) 41 c) 51 Ingestion Inhalation	a) 0.20-14.32 mg/kg b) 2.33-6.94 mg/kg c) 0.45-0.99 mg/kg Wet wt	a) 1.36+/-3.03 mg/kg b) Not applicable c) Not applicable	a) Control, Thomson-Fulton Sand Prairie b) 100-300 m transect, Ayers Sand Prairie, range of means c) 400-1000 m transect, Ayers Sand Prairie, range of means Distance from boundary of reclamation plant. b) higher levels than a), c). Parallel soil and grass levels. Illinois, Savanna, Ayers Sand Prairie Nature Preserve, Thomson-Fulton Sand Prairie Nature Preserve Moderate nonsuppurative pericholangitis in most cases AAS

DEER MICE; LEAD; ILLINOIS; BIOACCUMULATION; LIVER; KIDNEYS; AUTOPSIES; INDUSTRIAL POLLUTION; BONES; TERRESTRIAL; ENVIRONMENTAL EXPOSURE

Kisseberth, W.C.; Sundberg, J.P.; Nyboer, R.W.; Reynolds, J.D.; Kasten, S.C.; Beasley, V.R. 1984 Journal of the American Veterinary Medical Association 185(11):1309-1313

Mullet
MULLUS BARBATUS

Tissue	Cases Exposure Route	Range	Mean	General Information
4383 Muscle	a) 3 b) 3 c) 3	a) Not given b) Not given c) Not given	a) 610 ug/kg b) 388 ug/kg c) 265 ug/kg Wet wt	a) Thermaikos Gulf b) Kevala Gulf c) Strymonikos Gulf Collected 1980-82. Length 11-12 cm, wt 20-31 g Greece, North Aegean Sea AAS

GREECE; BODY; MUSCLES; CADMIUM; LEAD; MERCURY; BIOACCUMULATION; FISHES; WATER POLLUTION; MOLLUSKS

Vasilikiotis, G.; Fytianos, K.; Zotou, A. 1983 Chemosphere 12(1):75-81

Lead
7439-92-1
Pb
AtW 207.2, MP 327.4 C, BP 1740 C, VP 1.77 mm Hg at 1000 C, 1 mm Hg at 970 C, 10 mm Hg at 1160 C

Mussel
MYTILUS GALLOPROVINCIALIS

Tissue	Cases Exposure Route	Range	Mean	General Information
4384 Body	a) 8 b) 8 c) 10	a) 311-351 ug/kg b) 147-451 ug/kg c) 128-244 ug/kg Wet wt	a) 331 ug/kg b) 290 ug/kg c) 186 ug/kg Wet wt	a) Thermaikos Gulf b) Kavala Gulf c) Strymonikos Gulf Collected 1980-82. Length 3-6 cm, wt 3-11 g Greece, North Aegean Sea AAS

GREECE; BODY; MUSCLES; CADMIUM; LEAD; MERCURY; BIOACCUMULATION; FISHES; WATER POLLUTION; MOLLUSKS
Vasilikiotis, G.; Fytianos, K.; Zotou, A. 1983 Chemosphere 12(1):75-81

Tissue	Cases Exposure Route	Range	Mean	General Information
4385 Body	10	a) Not given b) Not given	a) 0.15 +or- 0.06 ug/g b) 3.32 +or- 0.72 ug/g Wet wt	a) Controls b) 100 ug/l for 3 wk South Africa, Cape Town, Bloubergstrand AAS

MOLLUSKS; BIOACCUMULATION; BIOINDICATORS; WATER POLLUTION; CADMIUM; CHROMIUM; COBALT; COPPER; LEAD; NICKEL; ZINC; BODY; SOUTH AFRICA
Watling, H.R. 1983 Bulletin of Environmental Contamination and Toxicology 30:317-322

Oldsquaw
CLANGULA HYEMALIS

Tissue	Cases Exposure Route	Range	Mean	General Information
4386 Bone	7 Ingestion	<0.5-331.4 ug/g Dry wt	144.0 ug/g Dry wt	80% average recovery, data not corrected for recovery. Data pooled includes white-winged scoters. Collected winters 1976-77, 1979-80. Chesapeake Bay AAS
4387 Kidney	7 Ingestion	<0.5-33.6 ug/g Dry wt	13.0 ug/g Dry wt	Data pooled includes white-winged scoters. Collected winters of 1976-77, 1979-80. Chesapeake Bay AAS

AQUATIC; CADMIUM; LEAD; COPPER; ZINC; LIVER; KIDNEYS; BONES; BIOLOGICAL MONITORING; UNITED STATES; BIOACCUMULATION; BIRDS; TERRESTRIAL; WATERFOWL; DUCKS; ENVIRONMENTAL EXPOSURE; DIETS; METALS
Giulio, R.T.; Scanlon, P.F. 1984 Environmental Pollution (Series A) 35:29-48

Lead
7439-92-1
Pb
AtW 207.2, MP 327.4 C, BP 1740 C, VP 1.77 mm Hg at 1000 C, 1 mm Hg at 970 C, 10 mm Hg at 1160 C

Otter, river
LUTRA CANADENSIS

Tissue	Cases Exposure Route	Range	Mean	General Information
4388 Bone	a) 198 b) 78	a) <0.40-35.16 mg/g b) <0.40-18.13 mg/g Dry wt	a) 1.41 +or- 0.22 mg/g b) 5.31 +or- 0.63 mg/g Dry wt	a) 1979-80 b) 1980-81 Collected during trapping seasons Virginia, Tidewater region AAS
4389 Kidney	a) 221 b) 169	a) <0.40-6.00 mg/g b) <0.40-9.75 mg/g Dry wt	a) 0.81 +or- 0.07 mg/g b) 1.68 +or- 0.15 mg/g Dry wt	a) 1979-80 b) 1980-81 Collected during trapping seasons Virginia, Tidewater region AAS
4390 Liver	a) 226 b) 131	a) <0.40-55.89 mg/g b) <0.40-16.97 mg/g Dry wt	a) 1.40 +or- 0.62 mg/g b) 3.43 +or- 0.37 mg/g Dry wt	a) 1979-80 b) 1980-81 Collected during trapping seasons Virginia, Tidewater region AAS

OTTERS; CADMIUM; COPPER; LEAD; ZINC; BIOACCUMULATION; WATER POLLUTION; BONES; KIDNEYS; LIVER; VIRGINIA

Anderson-Bledsoe, K.L.; Scanlon, P.F. 1983 Bulletin of Environmental Contamination and Toxicology 30:442-447

Oyster
CRASSOSTREA MARGARITACEA

Tissue	Cases Exposure Route	Range	Mean	General Information
4391 Body	10	a) Not given b) Not given	a) 0.08 +or- 0.04 ug/g b) 1.78 +or- 0.79 ug/g Wet wt	a) Controls b) 100 ug/l for 3 wk South Africa, Knysna Heads AAS

MOLLUSKS; BIOACCUMULATION; BIOINDICATORS; WATER POLLUTION; CADMIUM; CHROMIUM; COBALT; COPPER; LEAD; NICKEL; ZINC; BODY; SOUTH AFRICA

Watling, H.R. 1983 Bulletin of Environmental Contamination and Toxicology 30:317-322

Tissue	Cases Exposure Route	Range	Mean	General Information
4392 Muscle	Ingestion	a) Not given b) Not given	a) 5.85 ug/g b) 0.3 ug/g Wet wt	a) Backwaters of river, downstream from monazite processing plant, between Varapusha and Moolampalli. Received discharges b) Bombay coastal waters (Control) Levels below safe limits India, Periyar River and Bombay

MUSCLES; BIOLOGICAL MONITORING; INDIA; INDUSTRIAL POLLUTION; WATER POLLUTION; BIOCONCENTRATION; FOOD CONTAMINATION; LEAD; LEAD-210; PRAWNS; SHRIMP; OYSTERS; AQUATIC; ENVIRONMENTAL EXPOSURE; FISHES; RADIONUCLIDES

Borkar, M.D.; Paul, A.C.; Pillai, K.C. 1984 Science of the Total Environment 34:279-288

Lead
7439-92-1
Pb
AtW 207.2, MP 327.4 C, BP 1740 C, VP 1.77 mm Hg at 1000 C, 1 mm Hg at 970 C, 10 mm Hg at 1160 C

Oyster, American
CRASSOSTREA VIRGINICA

Tissue	Cases Exposure Route	Range	Mean	General Information
4393 Body	a) 104 b) 129 c) 95 d) 281 e) 376 Ingestion	a) Not detected-1.4 ug/g b) Not detected c) Not detected-trace d) Not detected-15.8 ug/g e) Not detected-6.3 ug/g Wet wt	a) 1.0 ug/g b) Not detected c) 0.6 ug/g d) 0.1 ug/g e) Not detected Wet wt	a) 1976 b) 1977 c) 1978 d) 1979 e) 1980 Biological monitoring for heavy metals in shellfish 1976-1980. Residues were well below safe levels. No significant yearly trends. Maryland, Chesapeake Bay area, tributaries AAS
CLAMS; BLUE CRABS; SHELLFISH; CHESAPEAKE BAY; MARYLAND; BIOLOGICAL MONITORING; BIOCONCENTRATION; COPPER; ZINC; LEAD; CADMIUM; ARSENIC; MERCURY; CHROMIUM; WATER POLLUTION; FOOD CONTAMINATION; AQUATIC; MOLLUSKS; ENVIRONMENTAL EXPOSURE				
Eisenberg, M.; Topping, J.J. 1984 Journal of Environmental Science and Health B19(7):649-671				

Oyster, Pacific
CRASSOSTREA GIGAS

Tissue	Cases Exposure Route	Range	Mean	General Information
4394 Body	10	a) Not given b) Not given	a) <0.05 ug/g b) 1.34 +or- 1.24 ug/g Wet wt	a) Controls b) 100 ug/l for 3 wk South Africa, Knysna Heads AAS
MOLLUSKS; BIOACCUMULATION; BIOINDICATORS; WATER POLLUTION; CADMIUM; CHROMIUM; COBALT; COPPER; LEAD; NICKEL; ZINC; BODY; SOUTH AFRICA				
Watling, H.R. 1983 Bulletin of Environmental Contamination and Toxicology 30:317-322				

Perch
PERCA FLUVIATILIS

Tissue	Cases Exposure Route	Range	Mean	General Information
4395 Liver	a) 10 b) 10 c) 10 Ingestion	a) Not given b) Not given c) Not given	a) 0.6+/-0.1 ug/g b) 0.6+/-0.1 ug/g c) 0.5+/-0.1 ug/g Dry wt	a) Controls b) 1:200 diluted effluent c) 1:20 diluted effluent 27 d exposure to heavy-metal-containing artificial effluent, designed to simulate effluent of a sulfide ore smelter. No significant uptake. Sweden AAS
LIVER; MUSCLES; FISHES; AQUATIC; DELIBERATE EXPOSURE; SWEDEN; METAL POISONING; ZINC; LEAD; COPPER; CADMIUM; MERCURY; ARSENIC; BIOACCUMULATION; INDUSTRIAL POLLUTION; WATER POLLUTION; ADULTS				
Larsson, A.; Haux, C.; Sjobeck, M.-L.; Lithner, G. 1984 Ecotoxicology and Environmental Safety 8:118-128				

Lead
7439-92-1
Pb
AtW 207.2, MP 327.4 C, BP 1740 C, VP 1.77 mm Hg at 1000 C, 1 mm Hg at 970 C, 10 mm Hg at 1160 C

Pintail
ANAS ACUTA

Tissue	Cases Exposure Route	Range	Mean	General Information
4396 Bone	14 Ingestion	<0.5-86.4 ug/g Dry wt	10.2 ug/g Dry wt	80% average recovery, data not corrected for recovery. Collected winters of 1976-77, 1979-80. Extensive interspecies variation. Possible sublethal effects. High levels linked to herbivorous diet. Chesapeake Bay AAS
4397 Kidney	5 Ingestion	<0.5-4.5 ug/g Dry wt	2.3 ug/g Dry wt	Collected winters of 1976-77, 1979-80. Extensive interspecies variation. Possible sublethal effects. Chesapeake Bay AAS
AQUATIC; CADMIUM; LEAD; COPPER; ZINC; LIVER; KIDNEYS; BONES; BIOLOGICAL MONITORING; UNITED STATES; BIOACCUMULATION; BIRDS; TERRESTRIAL; WATERFOWL; DUCKS; ENVIRONMENTAL EXPOSURE; DIETS; METALS				
Giulio, R.T.; Scanlon, P.F. 1984 Environmental Pollution (Series A) 35:29-48				

Pomfret, black

Tissue	Cases Exposure Route	Range	Mean	General Information
4398 Muscle	Ingestion	Not given	0.42 ug/g Wet wt	Coastal waters. Levels below safe limits. India, Bombay
MUSCLES; BIOLOGICAL MONITORING; INDIA; INDUSTRIAL POLLUTION; WATER POLLUTION; BIOCONCENTRATION; FOOD CONTAMINATION; LEAD; LEAD-210; PRAWNS; SHRIMP; OYSTERS; AQUATIC; ENVIRONMENTAL EXPOSURE; FISHES; RADIONUCLIDES				
Borkar, M.D.; Paul, A.C.; Pillai, K.C. 1984 Science of the Total Environment 34:279-288				

Prawn

Tissue	Cases Exposure Route	Range	Mean	General Information
4399 Muscle	Ingestion	a) Not given b) Not given	a) 6.0 ug/g b) 0.11 ug/g Wet wt	a) Backwater of river, downstream from monazite processing plant between Varapusha and Moolampalli. Received discharges b) Bombay coastal waters (Control) Levels below safe limits. a) higher levels than b). India, Periyar River and Bombay
MUSCLES; BIOLOGICAL MONITORING; INDIA; INDUSTRIAL POLLUTION; WATER POLLUTION; BIOCONCENTRATION; FOOD CONTAMINATION; LEAD; LEAD-210; PRAWNS; SHRIMP; OYSTERS; AQUATIC; ENVIRONMENTAL EXPOSURE; FISHES; RADIONUCLIDES				
Borkar, M.D.; Paul, A.C.; Pillai, K.C. 1984 Science of the Total Environment 34:279-288				

Lead
7439-92-1
Pb
AtW 207.2, MP 327.4 C, BP 1740 C, VP 1.77 mm Hg at 1000 C, 1 mm Hg at 970 C, 10 mm Hg at 1160 C

Scaup, greater
AYTHYA MARILA

Tissue	Cases Exposure Route	Range	Mean	General Information
4400 Bone	11 Ingestion	<0.5-11.8 ug/g Dry wt	1.9 ug/g Dry wt	80% average recovery data not corrected for recovery. Collected winters 1976-77, 1979-80. Extensive interspecies variation. Chesapeake Bay AAS
4401 Kidney	11 Ingestion	0.6-52.1 ug/g Dry wt	12.4 ug/g Dry wt	Collected winters 1976-77, 1979-80. Extensive interspecies variation. Chesapeake Bay AAS
AQUATIC; CADMIUM; LEAD; COPPER; ZINC; LIVER; KIDNEYS; BONES; BIOLOGICAL MONITORING; UNITED STATES; BIOACCUMULATION; BIRDS; TERRESTRIAL; WATERFOWL; DUCKS; ENVIRONMENTAL EXPOSURE; DIETS; METALS Giulio, R.T.; Scanlon, P.F. 1984 Environmental Pollution (Series A) 35:29-48				

Scaup, lesser
AYTHYA AFFINIS

Tissue	Cases Exposure Route	Range	Mean	General Information
4402 Bone	26 Ingestion	<0.5-91.4 ug/g Dry wt	4.8 ug/g Dry wt	80% average recovery, data not corrected for recovery. Collected winters of 1976-77, 1979-80. Extensive interspecies variations. Chesapeake Bay AAS
4403 Kidney	60 Ingestion	<0.5-477.3 ug/g Dry wt	12.5 ug/g Dry wt	Collected winters of 1976-77, 1979-80. Extensive interspecies variations. Chesapeake Bay AAS
AQUATIC; CADMIUM; LEAD; COPPER; ZINC; LIVER; KIDNEYS; BONES; BIOLOGICAL MONITORING; UNITED STATES; BIOACCUMULATION; BIRDS; TERRESTRIAL; WATERFOWL; DUCKS; ENVIRONMENTAL EXPOSURE; DIETS; METALS Giulio, R.T.; Scanlon, P.F. 1984 Environmental Pollution (Series A) 35:29-48				

Scoter, white-winged
MELANITTA FUSCA DEGLANDI

Tissue	Cases Exposure Route	Range	Mean	General Information
4404 Bone	7 Ingestion	<0.5-331.4 ug/g Dry wt	144.0 ug/g Dry wt	80% average recovery, data not corrected for recovery. Data pooled includes oldsquaws. Collected winters 1976-77, 1979-80. Chesapeake Bay AAS

(next page)

Lead
7439-92-1
Pb
AtW 207.2, MP 327.4 C, BP 1740 C, VP 1.77 mm Hg at 1000 C, 1 mm Hg at 970 C, 10 mm Hg at 1160 C

Scoter, white-winged
MELANITTA FUSCA DEGLANDI

(continued)

Tissue	Cases Exposure Route	Range	Mean	General Information
4405 Kidney	7 Ingestion	<0.5-33.6 ug/g Dry wt	13.0 ug/g Dry wt	Data pooled, includes oldsquaws. Collected winters 1976-77, 1979-80. Chesapeake Bay AAS
AQUATIC; CADMIUM; LEAD; COPPER; ZINC; LIVER; KIDNEYS; BONES; BIOLOGICAL MONITORING; UNITED STATES; BIOACCUMULATION; BIRDS; TERRESTRIAL; WATERFOWL; DUCKS; ENVIRONMENTAL EXPOSURE; DIETS; METALS Giulio, R.T.; Scanlon, P.F. 1984 Environmental Pollution (Series A) 35:29-48				

Seal, harp
PHOCA GROENLANDICA

Tissue	Cases Exposure Route	Range	Mean	General Information
4406 Blood	146 Ingestion	a) 0.13-0.30 mg/kg b) 0.06-0.11 mg/kg c) 0.02-0.14 mg/kg d) 0.02-0.16 mg/kg e) 0.03-0.10 mg/kg f) 0.06-0.11 mg/kg Wet wt	a) Not applicable b) Not applicable c) Not applicable d) Not applicable e) Not applicable f) Not applicable	a) Males, Gulf of St. Lawrence b) Females, Gulf of St. Lawrence c) Males, front ice off Newfoundland, Labrador d) Female, front ice off Newfoundland, Labrador e) Males, Grise fiord, Pangnirtung, Greenland f) Females, Grise fiord, Pangnirtung, Greenland Range of means. 1976-78 annual hunt. Statistical analyses included age, sex, site, elements, tissue/organ levels. Canada; Greenland; Northwest Atlantic; Arctic AAS
4407 Brain	159 Ingestion	a) 0.08-0.21 mg/kg b) 0.10-0.26 mg/kg c) 0.09-0.21 mg/kg d) 0.12-0.22 mg/kg e) 0.08-0.38 mg/kg f) 0.18-0.75 mg/kg Wet wt	a) Not applicable b) Not applicable c) Not applicable d) Not applicable e) Not applicable f) Not applicable	a) Males, Gulf of St. Lawrence b) Females, Gulf of St. Lawrence c) Males, front ice off Newfoundland, Labrador d) Female, front ice off Newfoundland, Labrador e) Males, Grise fiord, Pangnirtung, Greenland f) Females, Grise fiord, Pangnirtung, Greenland Range of means. 1976-78 annual hunt. Statistical analyses included age, sex, site, elements, tissue/organ levels. Canada; Greenland; Northwest Atlantic; Arctic AAS
4408 Kidney	232 Ingestion	a) 0.01-0.0[illegible] mg/kg b) 0.04-0.19 mg/kg c) 0.03-0.06 mg/kg d) 0.03-0.16 mg/kg e) 0.03-0.07 mg/kg f) 0.03-0.05 mg/kg Wet wt	a) Not applicable b) Not applicable c) Not applicable d) Not applicable e) Not applicable f) Not applicable	a) Males, Gulf of St. Lawrence b) Females, Gulf of St. Lawrence c) Males, front ice off Newfoundland, Labrador d) Female, front ice off Newfoundland, Labrador e) Males, Grise fiord, Pangnirtung, Greenland f) Females, Grise fiord, Pangnirtung, Greenland Range of means. 1976-78 annual hunt. Statistical analyses included age, sex, site, elements, tissue/organ levels. Canada; Greenland; Northwest Atlantic; Arctic AAS

(next page)

Lead
7439-92-1
Pb
AtW 207.2, MP 327.4 C, BP 1740 C, VP 1.77 mm Hg at 1000 C, 1 mm Hg at 970 C, 10 mm Hg at 1160 C

Seal, harp
PHOCA GROENLANDICA

(continued)

Tissue	Cases Exposure Route	Range	Mean	General Information
4409 Liver	216 Ingestion	a) 0.13-0.17 mg/kg b) 0.13-0.15 mg/kg c) 0.11-0.16 mg/kg d) 0.08-0.77 mg/kg e) 0.04-0.14 mg/kg f) 0.02-0.07 mg/kg Wet wt	a) Not applicable b) Not applicable c) Not applicable d) Not applicable e) Not applicable f) Not applicable	a) Males, Gulf of St. Lawrence b) Females, Gulf of St. Lawrence c) Males, front ice off Newfoundland, Labrador d) Female, front ice off Newfoundland, Labrador e) Males, Grise fiord, Pangnirtung, Greenland f) Females, Grise fiord, Pangnirtung, Greenland Range of means. 1976-78 annual hunt. Statistical analyses included age, sex, site, elements, tissue/organ levels. Canada; Greenland; Northwest Atlantic; Arctic AAS
4410 Muscle	227 Ingestion	a) 0.02-0.06 mg/kg b) 0.03-0.05 mg/kg c) 0.05-0.22 mg/kg d) 0.02-0.11 mg/kg e) 0.05-0.06 mg/kg f) 0.03-0.12 mg/kg Wet wt	a) Not applicable b) Not applicable c) Not applicable d) Not applicable e) Not applicable f) Not applicable	a) Males, Gulf of St. Lawrence b) Females, Gulf of St. Lawrence c) Males, front ice off Newfoundland, Labrador d) Female, front ice off Newfoundland, Labrador e) Males, Grise fiord, Pangnirtung, Greenland f) Females, Grise fiord, Pangnirtung, Greenland Range of means. 1976-78 annual hunt. Statistical analyses included age, sex, site, elements, tissue/organ levels. Canada; Greenland; Northwest Atlantic; Arctic AAS

SEALS; CADMIUM; LEAD; MERCURY; SELENIUM; COPPER; BIOACCUMULATION; BIOLOGICAL MONITORING; CANADA; GREENLAND; BLOOD; KIDNEYS; MUSCLES; LIVER; BRAIN; AGE; ARCTIC; ATLANTIC; SEX; AQUATIC ENVIRONMENTAL EXPOSURE; WATER POLLUTION

Ronald, K.; Frank, R.J.; Dougan, J.L.; Frank, R.; Braun, H.E. 1984 Science of the Total Environment 38:156-166

Sheep
OVIS sp.

Tissue	Cases Exposure Route	Range	Mean	General Information
4411 Bone	a) 8 b) 8 c) 8 Ingestion	a) Not given b) Not given c) Not given	a) 15.44 ug/g b) 15.75 ug/g c) 18.19 ug/g Dry wt +/-1.05 S.E.	Lambs from ewes on basal diet fortified with cottonseed meal b) Lambs from ewes on basal diet plus 7% undigested sewage solids c) Lambs from ewes on basal diet. New Mexico AAS

KIDNEYS; LIVER; BONES; SHEEP; TERRESTRIAL; ENVIRONMENTAL EXPOSURE; DELIBERATE EXPOSURE; NEW MEXICO; CADMIUM; CHROMIUM; COPPER; IRON; MERCURY; NICKEL; LEAD; ZINC; METALS; ANIMAL FEEDS; AGRICULTURE; BIOACCUMULATION; BIOLOGICAL MONITORING; FARMS; FOOD CONTAMINATION; LAND POLLUTION; SEWAGE; CALCIUM; BLOOD SERUM; MAGNESIUM; POTASSIUM; PHOSPHORUS; SODIUM

Hudgens, R.E.; Hallford, D.M. 1984 Nutrition Reports International 29(1):11-21

Lead
7439-92-1
Pb
AtW 207.2, MP 327.4 C, BP 1740 C, VP 1.77 mm Hg at 1000 C, 1 mm Hg at 970 C, 10 mm Hg at 1160 C

Sheep
OVIS sp.

Tissue	Cases Exposure Route	Range	Mean	General Information
4412 Kidney	a) 13 b) 7 c) 9 Ingestion	a) 0.2-0.8 mg/kg b) 0.4-1.1 mg/kg c) 0.3-1.1 mg/kg Wet wt	a) 0.30 mg/kg b) 0.80 mg/kg c) 0.50 mg/kg Wet wt Medians	a) Males <1 yr old b) Females <1 yr old c) Females 1-7.5 yr old Significant differences by sex, young females highest level. Levels inversely correlated with age. West Germany, Lueneburg heath AAS

LAND POLLUTION; ENVIRONMENTAL EXPOSURE; AIR POLLUTION; SHEEP; GERMANY; TERRESTRIAL; BIOLOGICAL MONITORING; LIVER; KIDNEYS; MUSCLES; BIOACCUMULATION; BIOCONCENTRATION; JUVENILES; ADULTS; SEX; RADIONUCLIDES; LEAD; CESIUM; POLONIUM; POTASSIUM; FOOD CONTAMINATION; FALL-OUT
Bunzl, K.; Kracke, W. 1984 Science of the Total Environment 39:143-159

Tissue	Cases Exposure Route	Range	Mean	General Information
4413 Kidney	a) 8 b) 8 Ingestion	a) Not given b) Not given	a) 1.1 ug/g b) 1.1 ug/g Dry wt	a) Lambs from ewes on basal diet fortified with cottonseed meal b) Lambs from ewes on basal diet. New Mexico AAS

KIDNEYS; LIVER; BONES; SHEEP; TERRESTRIAL; ENVIRONMENTAL EXPOSURE; DELIBERATE EXPOSURE; NEW MEXICO; CADMIUM; CHROMIUM; COPPER; IRON; MERCURY; NICKEL; LEAD; ZINC; METALS; ANIMAL FEEDS; AGRICULTURE; BIOACCUMULATION; BIOLOGICAL MONITORING; FARMS; FOOD CONTAMINATION; LAND POLLUTION; SEWAGE; CALCIUM; BLOOD SERUM; MAGNESIUM; POTASSIUM; PHOSPHORUS; SODIUM
Hudgens, R.E.; Hallford, D.M. 1984]utrition Reports International 29(1):11-21

Tissue	Cases Exposure Route	Range	Mean	General Information
4414 Liver	a) 13 b) 26 Ingestion	a) 0.4-1.0 mg/kg b) 0.6-1.5 mg/kg Wet wt	a) 0.70 mg/kg b) 0.90 mg/kg Wet wt Medians	a) Males <1 yr old b) Females 0.5-7.5 yr old Differences in levels in males and females. 8% males, 70% females had levels higher than Federal Health Office "Guidance Values '79" limits for liver as human food. Naturally occurring and fallout radionuclides. West Germany, Lueneburg heath AAS

LAND POLLUTION; ENVIRONMENTAL EXPOSURE; AIR POLLUTION; SHEEP; GERMANY; TERRESTRIAL; BIOLOGICAL MONITORING; LIVER; KIDNEYS; MUSCLES; BIOACCUMULATION; BIOCONCENTRATION; JUVENILES; ADULTS; SEX; RADIONUCLIDES; LEAD; CESIUM; POLONIUM; POTASSIUM; FOOD CONTAMINATION; FALL-OUT
Bunzl, K.; Kracke, W. 1984 Science of the Total Environment 39:143-159

Lead
7439-92-1
Pb
AtW 207.2, MP 327.4 C, BP 1740 C, VP 1.77 mm Hg at 1000 C, 1 mm Hg at 970 C, 10 mm Hg at 1160 C

Sheep
OVIS sp.

Tissue	Cases Exposure Route	Range	Mean	General Information
4415 Liver	a) 8 b) 8 c) 8 Ingestion	a) Not given b) Not given c) Not given	a) 1.00 ug/g b) 1.00 ug/g c) 1.00 ug/g Dry wt	a) Lambs from ewes on basal diet fortified with cottonseed meal b) Lambs from ewes on basal diet plus 7 % undigested sewage solids c) Lambs from ewes on basal diet. New Mexico AAS

KIDNEYS; LIVER; BONES; SHEEP; TERRESTRIAL; ENVIRONMENTAL EXPOSURE; DELIBERATE EXPOSURE; NEW MEXICO; CADMIUM; CHROMIUM; COPPER; IRON; MERCURY; NICKEL; LEAD; ZINC; METALS; ANIMAL FEEDS; AGRICULTURE; BIOACCUMULATION; BIOLOGICAL MONITORING; FARMS; FOOD CONTAMINATION; LAND POLLUTION; SEWAGE; CALCIUM; BLOOD SERUM; MAGNESIUM; POTASSIUM; PHOSPHORUS; SODIUM

Hudgens, R.E.; Hallford, D.M. 1984 Nutrition Reports International 29(1):11-21

Tissue	Cases Exposure Route	Range	Mean	General Information
4416 Muscle	40 Ingestion	</=0.05-0.21 mg/kg Wet wt	0.06 mg/kg Wet wt Median	0.5-7.5 yr olds. Naturally occurring and fallout radionuclides. West Germany, Lueneburg heath AAS

LAND POLLUTION; ENVIRONMENTAL EXPOSURE; AIR POLLUTION; SHEEP; GERMANY; TERRESTRIAL; BIOLOGICAL MONITORING; LIVER; KIDNEYS; MUSCLES; BIOACCUMULATION; BIOCONCENTRATION; JUVENILES; ADULTS; SEX; RADIONUCLIDES; LEAD; CESIUM; POLONIUM; POTASSIUM; FOOD CONTAMINATION; FALL-OUT

Bunzl, K.; Kracke, W. 1984 Science of the Total Environment 39:143-159

Shrimp

Tissue	Cases Exposure Route	Range	Mean	General Information
4417 Muscle	Ingestion	a) Not given b) Not given	a) 6.0 ug/g b) 0.11 ug/g Wet wt	Backwaters of river, downstream from monazite processing plant between Varapusha and Moolampalli. Received discharges b) Bombay coastal waters (Control) Levels below safe limits. India, Periyar River and Bombay

MUSCLES; BIOLOGICAL MONITORING; INDIA; INDUSTRIAL POLLUTION; WATER POLLUTION; BIOCONCENTRATION; FOOD CONTAMINATION; LEAD; LEAD-210; PRAWNS; SHRIMP; OYSTERS; AQUATIC; ENVIRONMENTAL EXPOSURE; FISHES; RADIONUCLIDES

Borkar, M.D.; Paul, A.C.; Pillai, K.C. 1984 Science of the Total Environment 34:279-288

Lead
7439-92-1
Pb
AtW 207.2, MP 327.4 C, BP 1740 C, VP 1.77 mm Hg at 1000 C, 1 mm Hg at 970 C, 10 mm Hg at 1160 C

Snail
BULLIA RHODOSTOMA

Tissue	Cases Exposure Route	Range	Mean	General Information
4418 Body	757	0.03-0.29 ug/g Wet wt	Not applicable	Collected 8/78-8/79 for national marine pollution monitoring program. Range of means. South Africa

BODY; AQUATIC; ENVIRONMENTAL EXPOSURE; SOUTH AFRICA; METALS; ZINC; CADMIUM; COPPER; LEAD; IRON; MANGANESE; NICKEL; COBALT; CHROMIUM; BIOINDICATORS; BIOLOGICAL MONITORING; BIOACCUMULATION; WATER POLLUTION; MOLLUSKS

Watling, H.R.; Watling, R.J. 1983 Bulletin of Environmental Contamination and Toxicology 31:331-338

Snail, aquatic
VALVATA PISCINALIS

Tissue	Cases Exposure Route	Range	Mean	General Information
4419 Body	50 Ingestion	a) Not given b) Not given c) 0.40-0.68 Dry wt	a) 0.11 mg/g b) 0.11 mg/g c) Not given Dry wt	a) Flosh Gate, lake outlet b) Gowbarrow Bay, midway on lake c) Ullswater Hotel, nearest mine drainage Levels reflected the degree of site pollution. England, Cumbria, Ullswater AAS
4420 Shell	50 Ingestion	a) Not given b) 0.03-0.04 mg/g c) Not given d) 0.11-0.26 mg/g Dry wt	a) <0.01 b) Not given c) 0.05 mg/g d) Not given Dry wt	a) Controls, Bassenthwaite and Lanty Tarn, freshwater lakes b) Flosh Gate, near lake outlet Ullswater Lake c) Gowbarrow Bay, midway on lake Ullswater d) Ullswater Hotel, nearest mine drainage Ullswater lake Levels reflected degree of site pollution. England, Cumbria AAS

SNAILS; AQUATIC; EELS; LEAD; BIOACCUMULATION; SHELL; MUSCLES; FOOT; BODY; BLOOD; LIVER; ENVIRONMENTAL EXPOSURE; DELIBERATE EXPOSURE; UNITED KINGDOM; WATER POLLUTION; INDUSTRIAL POLLUTION; MINING

Everard, M.; Denny, P. 1984 Environmental Pollution (Series A) 35:299-314

Lead
7439-92-1
Pb
AtW 207.2, MP 327.4 C, BP 1740 C, VP 1.77 mm Hg at 1000 C, 1 mm Hg at 970 C, 10 mm Hg at 1160 C

Stonefly
PLECOPTERA

Tissue	Cases Exposure Route	Range	Mean	General Information
4421 Body		a) 0-800 ppm b) 800-2200 ppm c) 700-900 ppm d) 650-2200 ppm	a) Not given b) Not given c) Not given d) Not given	a) Controls during dry weather b) Controls during wet weather c) Station 2, which drains half of business district, during wet weather d) Station 3, which receives total cumulative runoff load from the city, during dry weather Additional data for Station 1, a control with an artificial substrate, and three weather regimes: dry, rain and snow/thaw (wet= rain and snow/thaw) Estimated from graph Massachusetts, Greenfield, Green River AAS

URBAN AREAS; WATER POLLUTION; BIOINDICATORS; COPPER; CADMIUM; ZINC; LEAD; INSECTS; AQUATIC; BENTHOS; BODY; MASSACHUSETTS; ENVIRONMENTAL EXPOSURE
Medeiros, C.; LeBlanc, R.; Coler, R.A. 1983 Environmental Toxicology and Chemistry 2:119-126

Sucker, northern hog
HYPENTELIUM NIGRICANS

Tissue	Cases Exposure Route	Range	Mean	General Information
4422 Body	12	6.6-13.8 ug/g Dry wt	10.4 ug/g Dry wt Median	Highway-contaminated stream. No positive correlation with total length. Sediment association influenced inter-specific variation. Virginia, Back Creek AAS

BODY; AQUATIC; VIRGINIA; CADMIUM; LEAD; NICKEL; ZINC; METALS; AIR POLLUTION; WATER POLLUTION; BIOACCUMULATION; BIOLOGICAL MONITORING; FISHES; BONES
Ney, J.J.; Van Hassel, J.H. 1983 Archives of Environmental Contamination and Toxicology 12:701-706

Sucker, white
CATOSTOMUS COMMERSONI

Tissue	Cases Exposure Route	Range	Mean	General Information
4423 Body	26	6.5-27.6 ug/g Dry wt	12.1 ug/g Dry wt Median	Highway-contaminated stream. No positive correlation with total length. Sediment association influenced inter-specific variation. Virginia, Back Creek AAS

(next page)

Lead
7439-92-1
Pb
AtW 207.2, MP 327.4 C, BP 1740 C, VP 1.77 mm Hg at 1000 C, 1 mm Hg at 970 C, 10 mm Hg at 1160 C

Sucker, white
CATOSTOMUS COMMERSONI

(continued)

Tissue	Cases Exposure Route	Range	Mean	General Information
4424 Bone		a) Not given b) Not given c) Not given d) Not given	a) 21 ug/g b) 23 ug/g c) 27 ug/g d) 30 ug/g	a) Age 2 years b) 3 years c) 4 years d) 5 years Highway-contaminated streams. Significant positive correlations with age. Estimated with graph. Virginia, Back Creek AAS

BODY; AQUATIC; VIRGINIA; CADMIUM; LEAD; NICKEL; ZINC; METALS; AIR POLLUTION; WATER POLLUTION; BIOACCUMULATION; BIOLOGICAL MONITORING; FISHES; BONES
Ney, J.J.; Van Hassel, J.H. 1983 Archives of Environmental Contamination and Toxicology 12:701-706

Sunfish, redbreast
LEPOMIS AURITUS

Tissue	Cases Exposure Route	Range	Mean	General Information
4425 Body	30	5.6-11.3 ug/g Dry wt	7.2 ug/g Dry wt Median	Highway-contaminated stream. No positive correlation with total length. Sediment association influenced inter-specific variation. Virginia, Back Creek AAS

BODY; AQUATIC; VIRGINIA; CADMIUM; LEAD; NICKEL; ZINC; METALS; AIR POLLUTION; WATER POLLUTION; BIOACCUMULATION; BIOLOGICAL MONITORING; FISHES; BONES
Ney, J.J.; Van Hassel, J.H. 1983 Archives of Environmental Contamination and Toxicology 12:701-706

Swan, mute
CYGNUS OLOR

Tissue	Cases Exposure Route	Range	Mean	General Information
4426 Blood	a) 61 b) 21 c) 20 d) 26 Ingestion	a) 13-54 ug/100 ml b) 13-45 ug/100 ml c) 7-30 ug/100 ml d) 7-18 ug/100 ml	a) 24 ug/100 ml b) 27 ug/100 ml c) 12 ug/100 ml d) 11 ug/100 ml Medians	a) Adult males b) Adult females c) Juvenile males d) Juvenile females Captured alive during moulting season (9/10-10/5). Values significantly higher in adults, may reflect previous ingestion of lead shot as gizzard stones. Denmark, West Jutland, Ringkobing Fjord AAS

DENMARK; WATERFOWL; AQUATIC; TERRESTRIAL; ADULTS; JUVENILES; LEAD; BLOOD; ENVIRONMENTAL EXPOSURE; BIOACCUMULATION; BIOLOGICAL MONITORING
Eskildsen, J.; Grandjean, P. 1984 Toxicology Letters 21:225-229

Lead
7439-92-1
Pb
AtW 207.2, MP 327.4 C, BP 1740 C, VP 1.77 mm Hg at 1000 C, 1 mm Hg at 970 C, 10 mm Hg at 1160 C

Trout, rainbow
SALMO GAIRDNERI

Tissue	Cases Exposure Route	Range	Mean	General Information
4427 Blood, whole	120	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given g) Not given h) Not given	a) 2.5283+/-0.1216 b) 2.4776+/-0.2228 c) 2.6499+/-0.1131 d) 2.9617+/-0.2243 e) 2.9430+/-0.1832 f) 2.8235+/-0.2113 g) 2.9985+/-0.2506 h) 3.5389+/-0.1792 (log sub 10 ug/L)	a) 25 ug/L, constant waterborne level b) 25 ug/L, low variability in level c) 25 ug/L, medium variability d) 25 ug/L, high variability e) 100 ug/L, constant f) 100 ug/L, low variability g) 100 ug/L, medium variability h) 200 ug/L, high variability 20 d exposure levels. 6-8 mo old, 12.8-28.9 g. AAS
BLOOD; FISHES; AQUATIC; DELIBERATE EXPOSURE; LEAD; POPULATION EXPOSURE; BICACCUMULATION				
Hodson, P.V.; Blunt, B.R.; Borgmann, U.; Minns, C.K.; McGaw, S. 1983 Environmental Toxicology and Chemistry 2:225-238				

Wigeon, American
ANAS AMERICANA

Tissue	Cases Exposure Route	Range	Mean	General Information
4428 Bone	17 Ingestion	<0.5-12.9 ug/g Dry wt	3.7 ug/g Dry wt	80% average recovery, data not corrected for recovery. Collected winters of 1976-77, 1979-80. High levels linked to herbivorous diet. Spent shot contributed to body burden. Possible sublethal effects. Chesapeake Bay AAS
4429 Kidney	14 Ingestion	0.9-40.8 ug/g Dry wt	6.6 ug/g Dry wt	Collected winters of 1976-77, 1979-80. Extensive interspecies variation. Spent shot contributed to body burden. Possible sublethal effects. Chesapeake Bay AAS
AQUATIC; CADMIUM; LEAD; COPPER; ZINC; LIVER; KIDNEYS; BONES; BIOLOGICAL MONITORING; UNITED STATES; BIOACCUMULATION; BIRDS; TERRESTRIAL; WATERFOWL; DUCKS; ENVIRONMENTAL EXPOSURE; DIETS; METALS				
Giulio, R.T.; Scanlon, P.F. 1984 Environmental Pollution (Series A) 35:29-48				

Lead, isotope of mass 210
14255-04-0
Pb
MW 210
Fish
ETROPUS sp.

Tissue	Cases Exposure Route	Range	Mean	General Information
4430 Muscle	Ingestion	a) Not given b) Not given	a) 6.7X10-4 Bq/g b) 5.7X10-4 Bq/g Wet wt	a) Outfall area, received discharges from ore processing industries b) Chowara, upstream from industries area Levels below safe limits India, Periyar River
MUSCLES; BIOLOGICAL MONITORING; INDIA; INDUSTRIAL POLLUTION; WATER POLLUTION; BIOCONCENTRATION; FOOD CONTAMINATION; LEAD; LEAD-210; PRAWNS; SHRIMP; OYSTERS; AQUATIC; ENVIRONMENTAL EXPOSURE; FISHES; RADIONUCLIDES Borkar, M.D.; Paul, A.C.; Pillai, K.C. 1984 Science of the Total Environment 34:279-288				

Herring
CLUPEA sp.

Tissue	Cases Exposure Route	Range	Mean	General Information
4431 Muscle	Ingestion	a) Not given b) Not given	a) 7.7X10-4 Bq/g b) 2.2X10-4 Bq/g Wet wt	a) Vazhakulam b) Ernakulam Upstream from monasite processing plant. Levels below safe limits. India, Periyar River
MUSCLES; BIOLOGICAL MONITORING; INDIA; INDUSTRIAL POLLUTION; WATER POLLUTION; BIOCONCENTRATION; FOOD CONTAMINATION; LEAD; LEAD-210; PRAWNS; SHRIMP; OYSTERS; AQUATIC; ENVIRONMENTAL EXPOSURE; FISHES; RADIONUCLIDES Borkar, M.D.; Paul, A.C.; Pillai, K.C. 1984 Science of the Total Environment 34:279-288				

Prawn

Tissue	Cases Exposure Route	Range	Mean	General Information
4432 Muscle	Ingestion	Not given	4.3X10(E-3) Bq/g Wet wt	Backwaters area, downstream form monasite processing plant between Varapusha and Moolampalli. Received discharges. Levels below safe limits. India, Periyar River
MUSCLES; BIOLOGICAL MONITORING; INDIA; INDUSTRIAL POLLUTION; WATER POLLUTION; BIOCONCENTRATION; FOOD CONTAMINATION; LEAD; LEAD-210; PRAWNS; SHRIMP; OYSTERS; AQUATIC; ENVIRONMENTAL EXPOSURE; FISHES; RADIONUCLIDES Borkar, M.D.; Paul, A.C.; Pillai, K.C. 1984 Science of the Total Environment 34:279-288				

Lead, Isotope of mass 210
14255-04-0
Pb
MW 210
Sheep
OVIS sp.

Tissue	Cases Exposure Route	Range	Mean	General Information
4433 Kidney	a) 13 b) 26 Ingestion	a) 1.0-4.4 Bq/kg b) 0.92-5.8 Bq/kg Wet wt	a) 1.68 Bq/kg b) 2.38 Bq/kg Wet wt Medians	a) Males <1 yr old b) Females 0.5-7.5 yr old Males and females had significantly different levels, females higher. Naturally occurring and fallout radionuclides. West Germany, Lueneburg heath
4434 Liver	a) 13 b) 7 c) 19 Ingestion	a) 0.94-3.8 Bq/kg b) 1.9-3.1 Bq/kg c) 0.65-3.4 Bq/kg Wet wt	a) 1.82 Bq/kg b) 2.59 Bq/kg c) 1.61 Bq/kg Wet wt Medians	a) Males <1 yr old b) Females <1 yr old c) Females 1-7.5 yr old Significant difference between young males and females, females higher levels. Levels decreased significantly with age of female. Naturally occurring and fallout radionuclides. West Germany, Lueneburg heath

LAND POLLUTION; ENVIRONMENTAL EXPOSURE; AIR POLLUTION; SHEEP; GERMANY; TERRESTRIAL; BIOLOGICAL MONITORING; LIVER; KIDNEYS; MUSCLES; BIOACCUMULATION; BIOCONCENTRATION; JUVENILES; ADULTS; SEX; RADIONUCLIDES; LEAD; CESIUM; POLONIUM; POTASSIUM; FOOD CONTAMINATION; FALL-OUT

Bunzl, K.; Kracke, W. 1984 Science of the Total Environment 39:143-159

Shrimp

Tissue	Cases Exposure Route	Range	Mean	General Information
4435 Muscle	Ingestion	Not given	4X10(E-4) Bq/g Wet wt	Backwaters, downstream from monazite processing plant, between Varapuzha and Moolampalli. Received discharges. Levels below safe limits. India, Periyar River

MUSCLES; BIOLOGICAL MONITORING; INDIA; INDUSTRIAL POLLUTION; WATER POLLUTION; BIOCONCENTRATION; FOOD CONTAMINATION; LEAD; LEAD-210; PRAWNS; SHRIMP; OYSTERS; AQUATIC; ENVIRONMENTAL EXPOSURE; FISHES; RADIONUCLIDES

Borhar, M.D.; Paul, A.C.; Pillai, K.C. 1984 Science of the Total Environment 34:279-288

Lithium
7439-93-2
Li
AtW 6.941, MP 180.54 C, BP 1336 C, VP 1 mm Hg at 723 C, 10 mm Hg at 880 C

Cod, Pacific
GADUS MACROCEPHALUS

Tissue	Cases Exposure Route	Range	Mean	General Information
4436 Muscle	Ingestion	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given	a) 0.033+/-0.017 ug/g b) 0.029+/-0.002 ug/g c) 0.020+/-0.004 ug/g d) 0.030+/-0.012 ug/g e) 0.031+/-0.014 ug/g f) 0.031+/-0.014 ug/g Wet wt	a) Near Cape Flattery, WA, 50 fish, mean wt 2623+/-1174 g b) Cape Sarichef, AK, 12 fish, 1148+/-640 g c) Cape Ommaney, AK, 11 fish, 798+/-497 g d) Overall mean, combined sites e) Nape section of fish, 30 fillets f) Tail section of fish, 30 fillets. Pacific Ocean ES

FISHES; BIOLOGICAL MONITORING; PACIFIC OCEAN; ALUMINUM; BARIUM; CALCIUM; CHROMIUM; COPPER; IRON; MERCURY; POTASSIUM; LITHIUM; MAGNESIUM; MANGANESE; SODIUM; PHOSPHORUS; STRONTIUM; ZINC; AQUATIC; ENVIRONMENTAL EXPOSURE; WATER POLLUTION; FOOD CONTAMINATION; MUSCLES
Teeny, F.M.; Gauglitz, E.J., Jr.; Hall, A.S.; Houle, C.R. 1984 Journal of Agricultural and Food Chemistry 32:852-855

Mackerel, Atka
PLEUROGRAMMUS MONOPTERYGIUS

Tissue	Cases Exposure Route	Range	Mean	General Information
4437 Muscle	20 Ingestion	Not given	0.072+/-0.045 ug/g Wet wt	Off Kodiak Island, AK. Mean wt 461+/-156 g. Considered low level. Pacific Ocean ES

FISHES; BIOLOGICAL MONITORING; PACIFIC OCEAN; ALUMINUM; BARIUM; CALCIUM; CHROMIUM; COPPER; IRON; MERCURY; POTASSIUM; LITHIUM; MAGNESIUM; MANGANESE; SODIUM; PHOSPHORUS; STRONTIUM; ZINC; AQUATIC; ENVIRONMENTAL EXPOSURE; WATER POLLUTION; FOOD CONTAMINATION; MUSCLES
Teeny, F.M.; Gauglitz, E.J., Jr.; Hall, A.S.; Houle, C.R. 1984 Journal of Agricultural and Food Chemistry 32:852-855

Pollock, walleye
THERAGRA CHALCOGRAMMA

Tissue	Cases Exposure Route	Range	Mean	General Information
4438 Muscle	Ingestion	a) Not given b) Not given c) Not given d) Not given	a) 0.107+/-0.058 ug/g b) 0.073+/-0.032 ug/g c) 0.031+/-0.006 ug/g d) 0.077+/-0.037 ug/g Wet wt	a) Caught in Bering Sea, AK, 20 fish, mean wt 965+/-352 g b) Shelikof Strait, AK, 10 fish, 1300+/-488 g c) Cape Ommaney, AK, 12 fish, 325+/-223 g d) Overall mean, combined sites Considered low levels. Pacific Ocean ES

FISHES; BIOLOGICAL MONITORING; PACIFIC OCEAN; ALUMINUM; BARIUM; CALCIUM; CHROMIUM; COPPER; IRON; MERCURY; POTASSIUM; LITHIUM; MAGNESIUM; MANGANESE; SODIUM; PHOSPHORUS; STRONTIUM; ZINC; AQUATIC; ENVIRONMENTAL EXPOSURE; WATER POLLUTION; FOOD CONTAMINATION; MUSCLES
Teeny, F.M.; Gauglitz, E.J., Jr.; Hall, A.S.; Houle, C.R. 1984 Journal of Agricultural and Food Chemistry 32:852-855

Lithium
7439-93-2
Li
AtW 6.941, MP 180.54 C, BP 1336 C, VP 1 mm Hg at 723 C, 10 mm Hg at 890 C

Pomfret
BRAMA JAPONICA

Tissue	Cases Exposure Route	Range	Mean	General Information
4439 Muscle	24 Ingestion	Not given	0.030+/-0.067 ug/g Wet wt	Gulf of Alaska. Mean wt 1088+/-162 g. Considered low level. Pacific Ocean ES
FISHES; BIOLOGICAL MONITORING; PACIFIC OCEAN; ALUMINUM; BARIUM; CALCIUM; CHROMIUM; COPPER; IRON; MERCURY; POTASSIUM; LITHIUM; MAGNESIUM; MANGANESE; SODIUM; PHOSPHORUS; STRONTIUM; ZINC; AQUATIC; ENVIRONMENTAL EXPOSURE; WATER POLLUTION; FOOD CONTAMINATION; MUSCLES				
Teeny, F.M.; Gauglitz, E.J., Jr.; Hall, A.S.; Houle, C.R. 1984 Journal of Agricultural and Food Chemistry 32:852-855				

Shad, American
ALOSA SAPIDISSIMA

Tissue	Cases Exposure Route	Range	Mean	General Information
4440 Muscle	18 Ingestion	Not given	0.023+/-0.003 ug/g Wet wt	Near Seaside, OR. Mean wt 1039+/-251 g. Considered low level. Pacific Ocean ES
FISHES; BIOLOGICAL MONITORING; PACIFIC OCEAN; ALUMINUM; BARIUM; CALCIUM; CHROMIUM; COPPER; IRON; MERCURY; POTASSIUM; LITHIUM; MAGNESIUM; MANGANESE; SODIUM; PHOSPHORUS; STRONTIUM; ZINC; AQUATIC; ENVIRONMENTAL EXPOSURE; WATER POLLUTION; FOOD CONTAMINATION; MUSCLES				
Teeny, F.M.; Gauglitz, E.J., Jr.; Hall, A.S.; Houle, C.R. 1984 Journal of Agricultural and Food Chemistry 32:852-855				

Sole, Dover
MICROSTOMUS PACIFICUS

Tissue	Cases Exposure Route	Range	Mean	General Information
4441 Muscle	Ingestion	a) Not given b) Not given c) Not given d) Not given	a) 0.099+/-0.044 ug/g b) 0.035+/-0.003 ug/g c) 0.103+/-0.037 ug/g d) 0.086+/-0.034 ug/g Wet wt	a) Caught near Newport, OR, 29 fish, mean wt 660+/-326 g b) Cape Ommaney, AK, 11 fish, 506+/-214 g c) Santa Cruz, CA, 10 fish, 212+/-68 g d) Overall mean, combined sites. Considered low levels. Pacific Ocean ES
FISHES; BIOLOGICAL MONITORING; PACIFIC OCEAN; ALUMINUM; BARIUM; CALCIUM; CHROMIUM; COPPER; IRON; MERCURY; POTASSIUM; LITHIUM; MAGNESIUM; MANGANESE; SODIUM; PHOSPHORUS; STRONTIUM; ZINC; AQUATIC; ENVIRONMENTAL EXPOSURE; WATER POLLUTION; FOOD CONTAMINATION; MUSCLES				
Teeny, F.M.; Gauglitz, E.J., Jr.; Hall, A.S.; Houle, C.R. 1984 Journal of Agricultural and Food Chemistry 32:852-855				

Lithium
7439-93-2
Li
AtW 6.941, MP 180.54 C, BP 1336 C, VP 1 mm Hg at 723 C, 10 mm Hg at 890 C

Whiting, Pacific
MERLUCCIUS PRODUCTUS

Tissue	Cases Exposure Route	Range	Mean	General Information
4443 Muscle	a) 20 b) 32 Ingestion	a) Not given b) Not given	a) 0.108+/-0.029 ug/g b) 0.048+/-0.010 ug/g Wet wt	a) Near Astoria, OR, mean wt 873+/-246 g b) Refrigerated 2 d in seawater, Astoria, OR, 937+/-227 g. Considered low level. Pacific Ocean ES

FISHES; BIOLOGICAL MONITORING; PACIFIC OCEAN; ALUMINUM; BARIUM; CALCIUM; CHROMIUM; COPPER; IRON; MERCURY; POTASSIUM; LITHIUM; MAGNESIUM; MANGANESE; SODIUM; PHOSPHORUS; STRONTIUM; ZINC; AQUATIC; ENVIRONMENTAL EXPOSURE; WATER POLLUTION; FOOD CONTAMINATION; MUSCLES
Teeny, F.M.; Gauglitz, E.J., Jr.; Hall, A.S.; Houle, C.R. 1984 Journal of Agricultural and Food Chemistry 32:852-855

Magnesium
7439-95-4
Mg
AtW 24.305, MP 651 C, BP 1100 C, VP 1 mm Hg at 621 C, 10 mm Hg at 740 C

Beaver
CASTOR CANADENSIS

Tissue	Cases Exposure Route	Range	Mean	General Information
4443 Intestine	4 Ingestion	Not given	164+/-36 ug/g	Undisturbed watershed. Specimens from fur trapper. Canada, Ontario, Georgian Bay, Tadenac Lake ES
4444 Kidney	4 Ingestion	Not given	154+/-5 ug/g	Undisturbed watershed. Specimens from fur trapper. Canada, Ontario, Georgian Bay, Tadenac Lake ES
4445 Liver	4 Ingestion	Not given	148+/-30 ug/g	Undisturbed watershed. Specimens from fur trapper. Canada, Ontario, Georgian Bay, Tadenac Lake ES
4446 Muscle	4 Ingestion	Not given	353+/-13 ug/g	Undisturbed watershed. Specimens from fur trapper. Canada, Ontario, Georgian Bay, Tadenac Lake ES

BEAVERS; OTTERS; RACCOONS; CANADA; BIOACCUMULATION; BIOMAGNIFICATION; SELENIUM; IRON; COPPER; CADMIUM; CALCIUM; ALUMINUM; MAGNESIUM; MANGANESE; SODIUM; NICKEL; PHOSPHORUS; ZINC; POTASSIUM; DETOXIFICATION; DIETS; LIVER; KIDNEYS; INTESTINES; MUSCLES; AQUATIC; TERRESTRIAL; ENVIRONMENTAL EXPOSURE; BIOLOGICAL MONITORING
Wren, C.D. 1984 Science of the Total Environment 34:177-184

Magnesium
7439-95-4
Mg
AtW 24.305, MP 651 C, BP 1100 C, VP 1 mm Hg at 621 C, 10 mm Hg at 740 C
Cattle
BOS sp.

Tissue	Cases Exposure Route	Range	Mean	General Information
4447 Blood, serum	12 Ingestion	a) 19-19 ppm b) 19-20 ppm c) 19-18 ppm d) 19-18 ppm e) 19-23 ppm f) 15-15 ppm g) 15-10 ppm	a) Not applicable b) Not applicable c) Not applicable d) Not applicable e) Not applicable f) Not applicable g) Not applicable	a) Controls, plateau for 9 d, 4 cases b) 2000 ppm Mn/d for 4 d dietary supplement, gradual increase for 9 d, 4 cases c) 4000 ppm Al/d for 4 d, trough (13 ppm) on d 5, 4 cases d) 4000 ppm Al and 2000 ppm Mn/d for 4 d, trough (13 ppm) on d 5, 4 cases e) Lactating controls, 0-8 d, gradual increase, 2 cases f) Lactating animals fed 4000 ppm Al/d for 4 d, 1-8 d, peak (17 ppm) on d 7, 3 cases g) Lactating animals fed 4000 ppm Al and 2000 ppm Mn/d for 4 d, 1-8 d, peak (15 ppm) on d 7, 3 cases Al and Mn as sulphate. Sulphate Al depresses serum Mg. Louisiana AAS
BLOOD SERUM; CATTLE; TERRESTRIAL; LOUISIANA; DELIBERATE EXPOSURE; NUTRITIONAL DISORDERS; ALUMINUM; MAGNESIUM; MINERALS; BIOACCUMULATION; ANIMAL FEEDS Allen, V.G.; Robinson, D.L.; Hembry, F.G. 1984 Nutrition Reports International 29(1):107-115				

Tissue	Cases Exposure Route	Range	Mean	General Information
4448 Blood, serum	a) 1 b) 1 Ingestion	a) 0.34-1.76 mg/dL b) 1.30-2.27 mg/dL	Not applicable	a) Lactating Angus given 226 g bolus with 87% Mg. Levels decreasing from 3/5-3/16, tetanic convulsions on 3/16 b) Control, no bolus. Levels decreasing from 2/13-2/27 Admin of 1 or 2 boluses did not significantly affect serum levels. Additional values given. AAS
GEORGIA; BLOOD SERUM; CATTLE; MAGNESIUM; TERRESTRIAL; ADULTS; DELIBERATE EXPOSURE; NUTRITIONAL DISORDERS; ANIMAL FEEDS; TRACE ELEMENTS Stuedemann, J.A.; Wilkinson, S.R.; Lowrey, R.S. 1984 American Journal of Veterinary Research 45(4):698-702				

Magnesium
7439-95-4
Mg
AtW 24.305, MP 651 C, BP 1100 C, VP 1 mm Hg at 621 C, 10 mm Hg at 740 C

Cod, Pacific
GADUS MACROCEPHALUS

Tissue	Cases Exposure Route	Range	Mean	General Information
4449 Muscle	Ingestion	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given	a) 276+/-27 ug/g b) 292+/-28 ug/g c) 302+/-15 ug/g d) 28.2+/-2.5 mg/100 g e) 279+/-26 ug/g f) 250+/-26 ug/g Wet wt	a) Near Cape Flattery, WA, 50 fish, mean wt 2623+/-1174 g b) Cape Sarichef, AK, 12 fish, 1148+/-649 g c) Cape Ommaney, AK, 11 fish, 798+/-497 g d) Overall mean, combined sites e) Nape section of fish, 30 fillets f) Tail section of fish, 30 fillets. Slightly higher levels in nape indicated differential distribution. Pacific Ocean ES
FISHES; BIOLOGICAL MONITORING; PACIFIC OCEAN; ALUMINUM; BARIUM; CALCIUM; CHROMIUM; COPPER; IRON; MERCURY; POTASSIUM; LITHIUM; MAGNESIUM; MANGANESE; SODIUM; PHOSPHORUS; STRONTIUM; ZINC; AQUATIC; ENVIRONMENTAL EXPOSURE; WATER POLLUTION; FOOD CONTAMINATION; MUSCLES				
Teeny, F.M.; Gauglitz, E.J., Jr.; Hall, A.S.; Houle, C.R. 1984 Journal of Agricultural and Food Chemistry 32:852-855				

Lizard, water
TRITURUS PYRRHOGASTER

Tissue	Cases Exposure Route	Range	Mean	General Information
4450 Kidney	a) 5 b) 5 Injection	a) Not given b) Not given	a) 129+/-11 ug/g b) 127+/-7 ug/g Wet wt	a) Controls, distilled water (0.1 ml/head), I.M. b) CdCl2, I.M. during 11 d (0.5 mg, 3x and 1.0 mg Cd/kg body wt, 2x), killed 1 d after last injection Kidney wt 36+/-8-43+/-6 mg ES
4451 Liver	a) 5 b) 5 Injection	a) Not given b) Not given	a) 132+/-19 ug/g b) 130+/-7 ug/g Wet wt	a) Controls, distilled water (0.1 ml/head), I.M. b) CdCl2, I.M. during 11 d (0.5 mg, 3x and 1.0 mg Cd/kg body wt, 2x), killed 1 d after last injection Liver wt 349+/-108-411+/-80 mg ES
AMPHIBIANS; LIVER; KIDNEYS; DELIBERATE EXPOSURE; CADMIUM; COPPER; ZINC; AQUATIC; TERRESTRIAL; IRON; MAGNESIUM; CALCIUM; PHOSPHORUS				
Suzuki, K.T.; Akitomi, H.; Kawamura, R. 1984 Toxicology Letters 21:179-184				

Magnesium
7439-95-4
Mg
AtW 24.305, MP 651 C, BP 1100 C, VP 1 mm Hg at 621 C, 10 mm Hg at 740 C

Mackerel, Atka
PLEUROGRAMMUS MONOPTERYGIUS

Tissue	Cases Exposure Route	Range	Mean	General Information
4452 Muscle	20 Ingestion	Not given	297+/-17 ug/g Wet wt	a) Near Cape Flattery, WA, 50 fish, mean wt 2623+/-1174 g b) Cape Sarichef, AK, 12 fish, 1146+/-649 g c) Cape Ommaney, AK, 11 fish, 798+/-497 g d) Overall mean, combined sites e) Nape section of fish, 30 fillets f) Tail section of fish, 30 fillets. Interspecies variation among 7 species studied. Pacific Ocean ES

FISHES; BIOLOGICAL MONITORING; PACIFIC OCEAN; ALUMINUM; BARIUM; CALCIUM; CHROMIUM; COPPER; IRON; MERCURY; POTASSIUM; LITHIUM; MAGNESIUM; MANGANESE; SODIUM; PHOSPHORUS; STRONTIUM; ZINC; AQUATIC; ENVIRONMENTAL EXPOSURE; WATER POLLUTION; FOOD CONTAMINATION; MUSCLES
Teeny, F.M.; Gauglitz, E.J., Jr.; Hall, A.S.; Houle, C.R. 1984 Journal of Agricultural and Food Chemistry 32:852-855

Otter
LUTRA CANADENSIS

Tissue	Cases Exposure Route	Range	Mean	General Information
4453 Intestine	4 Ingestion	Not given	174+/-55 ug/g	Undisturbed watershed. Specimens from fur trapper. Canada, Ontario, Georgian Bay, Tadenac Lake ES
4454 Kidney	4 Ingestion	Not given	131+/-31 ug/g	Undisturbed watershed. Specimens from fur trapper. Canada, Ontario, Georgian Bay, Tadenac Lake ES
4455 Liver	4 Ingestion	Not given	192+/-29 ug/g	Undisturbed watershed. Specimens from fur trapper. Canada, Ontario, Georgian Bay, Tadenac Lake ES
4456 Muscle	4 Ingestion	Not given	331+/-40 ug/g	Undisturbed watershed. Specimens from fur trapper. Canada, Ontario, Georgian Bay, Tadenac Lake ES

BEAVERS; OTTERS; RACCOONS; CANADA; BIOACCUMULATION; BIOMAGNIFICATION; SELENIUM; IRON; COPPER; CADMIUM; CALCIUM; ALUMINUM; MAGNESIUM; MANGANESE; SODIUM; NICKEL; PHOSPHORUS; ZINC; POTASSIUM; DETOXIFICATION; DIETS; LIVER; KIDNEYS; INTESTINES; MUSCLES; AQUATIC; TERRESTRIAL; ENVIRONMENTAL EXPOSURE; BIOLOGICAL MONITORING
Wren, C.D. 1984 Science of the Total Environment 34:177-184

Magnesium

7439-95-4
Mg
AtW 24.305, MP 651 C, BP 1100 C, VP 1 mm Hg at 621 C, 10 mm Hg at 740 C

Pollock, walleye
THERAGRA CHALCOGRAMMA

Tissue	Cases Exposure Route	Range	Mean	General Information
4457 Muscle	Ingestion	a) Not given b) Not given c) Not given d) Not given	a) 254+/-40 ug/g b) 281+/-32 ug/g c) 324+/-12 ug/g d) 28.0+/-3.40 mg/100 g Wet wt	a) Caught in Bering Sea, AK, 20 fish, mean wt 965+/-352 g b) Shelik of Strait, AK, 10 fish, 1300+/-488 g c) Cape Ommaney. AK, 12 fish, 323+/-233 g. Site variations in levels. Pacific Ocean ES
FISHES; BIOLOGICAL MONITORING; PACIFIC OCEAN; ALUMINUM; BARIUM; CALCIUM; CHROMIUM; COPPER; IRON; MERCURY; POTASSIUM; LITHIUM; MAGNESIUM; MANGANESE; SODIUM; PHOSPHORUS; STRONTIUM; ZINC; AQUATIC; ENVIRONMENTAL EXPOSURE; WATER POLLUTION; FOOD CONTAMINATION; MUSCLES Teeny, F.M.; Gauglitz, E.J., Jr.; Hall, A.S.; Houle, C.R. 1984 Journal of Agricultural and Food Chemistry 32:852-855				

Pomfret
BRAMA JAPONICA

Tissue	Cases Exposure Route	Range	Mean	General Information
4458 Muscle	24 Ingestion	Not given	287+/-27 ug/g Wet wt	a) Near Cape Flattery, WA, 50 fish, mean wt 2623+/-1174 g b) Cape Sarichef, AK, 12 fish, 1148+/-649 g c) Cape Ommaney, AK, 11 fish, 798+/-497 g d) Overall mean, combined sites e) Nape section of fish, 30 fillets f) Tail section of fish, 30 fillets. Interspecies variations among 7 species studied. Pacific Ocean ES
FISHES; BIOLOGICAL MONITORING; PACIFIC OCEAN; ALUMINUM; BARIUM; CALCIUM; CHROMIUM; COPPER; IRON; MERCURY; POTASSIUM; LITHIUM; MAGNESIUM; MANGANESE; SODIUM; PHOSPHORUS; STRONTIUM; ZINC; AQUATIC; ENVIRONMENTAL EXPOSURE; WATER POLLUTION; FOOD CONTAMINATION; MUSCLES Teeny, F.M.; Gauglitz, E.J., Jr.; Hall, A.S.; Houle, C.R. 1984 Journal of Agricultural and Food Chemistry 32:852-855				

Raccoon
PROCYON LOTOR

Tissue	Cases Exposure Route	Range	Mean	General Information
4459 Kidney	4 Ingestion	Not given	153+/-16 ug/g	Undisturbed watershed. Specimens from fur trapper. Canada, Ontario, Georgian Bay, Tadenac Lake ES
4460 Liver	4 Ingestion	Not given	182+/-7 ug/g	Undisturbed watershed. Specimens from fur trapper. Canada, Ontario, Georgian Bay, Tadenac Lake ES

(next page)

Magnesium
7439-95-4
Mg
AtW 24.305, MP 651 C, BP 1100 C, VP 1 mm Hg at 621 C, 10 mm Hg at 740 C

Raccoon
PROCYON LOTOR

(continued)

Tissue	Cases Exposure Route	Range	Mean	General Information
4461 Muscle	4 Ingestion	Not given	204+/-50 ug/g	Undisturbed watershed. Specimens from fur trapper. Canada, Ontario, Georgian Bay, Tadenac Lake ES
BEAVERS; OTTERS; RACCOONS; CANADA; BIOACCUMULATION; BIOMAGNIFICATION; SELENIUM; IRON; COPPER; CADMIUM; CALCIUM; ALUMINUM; MAGNESIUM; MANGANESE; SODIUM; NICKEL; PHOSPHORUS; ZINC; POTASSIUM; DETOXIFICATION; DIETS; LIVER; KIDNEYS; INTESTINES; MUSCLES; AQUATIC; TERRESTRIAL; ENVIRONMENTAL EXPOSURE; BIOLOGICAL MONITORING Wren, C.D. 1984 Science of the Total Environment 34:177-184				

Shad, American
ALOSA SAPIDISSIMA

Tissue	Cases Exposure Route	Range	Mean	General Information
4462 Muscle	13 Ingestion	Not given	306+/-27 ug/g Wet wt	a) Near Cape Flattery, WA, 50 fish, mean wt 2623+/-1174 g b) Cape Sarichef, AK, 12 fish, 1148+/-649 g c) Cape Ommaney, AK, 11 fish, 798+/-407 g d) Overall mean, combined sites e) Nape section of fish, 30 fillets f) Tail section of fish, 30 fillets. Interspecies variations among 7 species studied. Pacific Ocean ES
FISHES; BIOLOGICAL MONITORING; PACIFIC OCEAN; ALUMINUM; BARIUM; CALCIUM; CHROMIUM; COPPER; IRON; MERCURY; POTASSIUM; LITHIUM; MAGNESIUM; MANGANESE; SODIUM; PHOSPHORUS; STRONTIUM; ZINC; AQUATIC; ENVIRONMENTAL EXPOSURE; WATER POLLUTION; FOOD CONTAMINATION; MUSCLES Teeny, F.M.; Gauglitz, E.J., Jr.; Hall, A.S.; Houle, C.R. 1984 Journal of Agricultural and Food Chemistry 32:852-855				

Magnesium
7439-95-4
Mg
AtW 24.305, MP 651 C, BP 1100 C, VP 1 mm Hg at 621 C, 10 mm Hg at 740 C

Sheep
OVIS sp.

Tissue	Cases Exposure Route	Range	Mean	General Information
4463 Blood, plasma	4 Intraruminal	a) 1.89-1.98 mg b) 1.74-1.87 mg c) 1.84-1.87 mg d) 1.78-1.87 mg /100 ml Range of means	a) Not given b) Not given c) Not given d) Not given	a) Controls, 0 time, 500 ml water, thermoneutral (20 C) temperature b) Water, exposure to cold (0-5C) c) 1.5 g/kg KCl, thermoneutral temperature d) 1.5 g/kg KCl, cold temperature Measurements from 4 animals at 0, 1, 2, 3, 4 hr after treatment. Cross-bred wethers avg 39.4+/-4.8 kg body wt were fed a low-Mg diet (MgO, 16.6 mg/kg) at 1.5% of body wt once daily. Each subjected to 4 treatments in a 4x4 Latin square design. AAS

SHEEP; MAGNESIUM; BLOOD PLASMA; TERRESTRIAL; DELIBERATE EXPOSURE; UNITED STATES; NUTRITIONAL DEFICIENCIES; COMPARATIVE EVALUATIONS; DIETS; POTASSIUM; CALCIUM

Terashima, Y.; Tucker, R.E.; Deetz, L.E.; Muntifering, R.B.; Mitchell, G.E., Jr. 1984 Nutrition Reports International 29(4):869-875

Tissue	Cases Exposure Route	Range	Mean	General Information
4464 Blood, serum	a) 16 b) 16 c) 16	a) Not given b) Not given c) Not given	a) 2.1 meq/l b) 2.1 meq/l c) 2.0 meq/l +/-0.1 S.E.	Lambs whose dams had basal diet fortified with cottonseed meal for 2 yr b) Same as a), basal diet plus 7% undigested sewage solids c) Same as a), basal diet Did not differ from controls. New Mexico AAS

KIDNEYS; LIVER; BONES; SHEEP; TERRESTRIAL; ENVIRONMENTAL EXPOSURE; DELIBERATE EXPOSURE; NEW MEXICO; CADMIUM; CHROMIUM; COPPER; IRON; MERCURY; NICKEL; LEAD; ZINC; METALS; ANIMAL FEEDS; AGRICULTURE; BIOACCUMULATION; BIOLOGICAL MONITORING; FARMS; FOOD CONTAMINATION; LAND POLLUTION; SEWAGE; CALCIUM; BLOOD SERUM; MAGNESIUM; POTASSIUM; PHOSPHORUS; SODIUM

Hudgens, R.E.; Hallford, D.M. 1984 Nutrition Reports International 29(1):11-21

Silkworm
BOMBYX MORI

Tissue	Cases Exposure Route	Range	Mean	General Information
4465 Alimentary canal	Ingestion	a) Not given b) Not given	a) 2040+/-87 ug/g b) 1930+/-170 ug/g Dry wt	a) Controls b) Treatment After diet containing no (controls), or 80 ug Cd/g wet wt, fed from hatching until 6th day of 5th instar. Japan AAS

(next page)

Magnesium
7439-95-4
Mg
AtW 24.305,MP 651 C, BP 1100 C, VP 1 mm Hg at 621 C, 10 mm Hg at 740 C

Silkworm
BOMBYX MORI

(continued)

Tissue	Cases Exposure Route	Range	Mean	General Information
4466 Fat body	Ingestion	a) Not given b) Not given	a) 339+/-86 ug/g b) 366+/-34 ug/g Dry wt	a) Controls b) Treatment After diet containing no (controls), or 80 ug Cd/g wet wt, fed from hatching until 6th day of 5th instar. Japan AAS
4467 Gonads	Ingestion	a) Not given b) Not given	a) 1610 ug/g b) 1490 ug/g Dry wt	a) Controls b) Treatment After diet containing no (controls), or 80 ug Cd/g wet wt, fed from hatching until 6th day of 5th instar. Japan AAS
4468 Head	Ingestion	a) Not given b) Not given	a) 1940+/-120 ug/g b) 1720+/-49 ug/g Dry wt	a) Controls b) Treatment After diet containing no (controls), or 80 ug Cd/g wet wt, fed from hatching until 6th day of 5th instar. Japan AAS
4469 Integument	Ingestion	a) Not given b) Not given	a) 452+/-87 ug/g b) 290+/-52 ug/g Dry wt	a) Controls b) Treatment After diet containing no (controls), or 80 ug Cd/g wet wt, fed from hatching until 6th day of 5th instar. Japan AAS
4470 Malpighian tubes	Ingestion	a) Not given b) Not given	a) 1240+/-103 ug/g b) 2420+/-360 ug/g Dry wt	a) Controls b) Treatment After diet containing no (controls), or 80 ug Cd/g wet wt, fed from hatching until 6th day of 5th instar. Japan AAS
4471 Silk gland	Ingestion	a) Not given b) Not given	a) 736+/-12 ug/g b) 749+/-61 ug/g Dry wt	a) Controls b) Treatment After diet containing no (controls), or 80 ug Cd/g wet wt, fed from hatching until 6th day of 5th instar. Japan AAS

(next page)

Magnesium
7439-95-4
Mg
AtW 24.305,MP 651 C, BP 1100 C, VP 1 mm Hg at 621 C, 10 mm Hg at 740 C

Silkworm
BOMBYX MORI

(continued)

Tissue	Cases Exposure Route	Range	Mean	General Information
4473 Trachea	Ingestion	a) Not given b) Not given	a) 874+/-56 ug/g b) 733+/-50 ug/g Dry wt	a) Controls b) Treatment After diet containing no (controls), or 80 ug Cd/g wet wt, fed from hatching until 6th day of 5th instar. Japan AAS

SILK GLAND; HEAD; TRACHEA; MALPIGHIAN TUBES; GASTROINTESTINAL TRACT; GONADS; FAT BODY; INTEGUMENT; DELIBERATE EXPOSURE; SILKWORMS; TERRESTRIAL; JAPAN; METAL POISONING; METALS; CADMIUM; ZINC; COPPER; CALCIUM; IRON; MAGNESIUM; MANGANESE; ALUMINUM; SODIUM; POTASSIUM; BIOACCUMULATION
Suzuki, K.T.; Aoki, Y.; Nishikawa, M.; Masui, H.; Matsubara, F. 1984 Comparative Biochemistry and Physiology 79C(2):249-253

Sole, Dover
MICROSTOMUS PACIFICUS

Tissue	Cases Exposure Route	Range	Mean	General Information
4473 Muscle	Ingestion	a) Not given b) Not given c) Not given d) Not given	a) 194+/-28 ug/g b) 247+/-16 ug/g c) 265+/-44 ug/g d) 22.0+/-2.90 mg/100 g Wet wt	a) Caught near Newport, OR, 29 fish, mean wt 660+/-326 g b) Cape Ommaney, AK, 11 fish, 506+/-214 g c) Santa Cruz, CA, 10 fish, 212+/-68 g d) Overall mean, combined sites. Site variations in levels. Pacific Ocean ES

FISHES; BIOLOGICAL MONITORING; PACIFIC OCEAN; ALUMINUM; BARIUM; CALCIUM; CHROMIUM; COPPER; IRON; MERCURY; POTASSIUM; LITHIUM; MAGNESIUM; MANGANESE; SODIUM; PHOSPHORUS; STRONTIUM; ZINC; AQUATIC; ENVIRONMENTAL EXPOSURE; WATER POLLUTION; FOOD CONTAMINATION; MUSCLES
Teeny, F.M.; Gauglitz, E.J., Jr.; Hall, A.S.; Houle, C.R. 1984 Journal of Agricultural and Food Chemistry 32:852-855

Swine
SUS sp.

Tissue	Cases Exposure Route	Range	Mean	General Information
4474 Milk	60 Ingestion	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given g) Not given h) Not given	a) 98 ug/ml b) 105 ug/ml c) 103 ug/ml d) 102 ug/ml e) 131 ug/ml f) 127 ug/ml g) 135 ug/ml h) 142 ug/ml	a) Colostrum, no dietary supplement b) Colostrum, 50 ppm Zn c) Colostrum, 500 ppm Zn d) Colostrum, 5000 ppm Zn e) After 3 wk of lactation, no dietary supplement f) After 3 wk of lactation, 50 ppm Zn g) After 3 wk of lactation, 500 ppm Zn h) After 3 wk of lactation, 5000 ppm Zn Crossbred and pure Yorkshire gilts, mean pretreatment wt 80 kg AAS

SWINE; COLOSTRUM; MILK; CALCIUM; COPPER; IRON; MAGNESIUM; MINERALS; PHOSPHORUS; ZINC; ANIMAL FEEDS; DIETS; LACTATION
Hill, G.M.; Miller, E.R.; Ku, P.K. 1983 Journal of Animal Science 57(1):123-129

Magnesium
7439-95-4
Mg
AtW 24.305, MP 651 C, BP 1100 C, VP 1 mm Hg at 621 C, 10 mm Hg at 740 C

Trout, rainbow
SALMO GAIRDNERI

Tissue	Cases Exposure Route	Range	Mean	General Information
4475 Kidney		a) Not given b) Not given c) Not given d) Not given	a) 0.58+/-0.4 mg/g b) 0.60+/-0.02 mg/g c) 0.67+/-0.06 mg/g d) 6.26+/-1.96 mg/g Dry wt	a) Controls 0.6 ug Se/g in diet b) 6.6 ug Se/g diet (some added as Na-selenite) c) 11.4 ug Se/g diet (some added as Na-selenite) d) Overt lesions of nephrocalcinosis. Diets consumed for 24 wk. Initial body wt 0.6+/-0.1 g. Juveniles. d) had significantly higher levels.
4476 Liver	60 Ingestion	a) Not given b) Not given c) Not given d) Not given	a) 0.59+/-0.05 mg/g b) 0.55+/-0.02 mg/g c) 0.58+/-0.03 mg/g d) 0.71+/-0.01 mg/g Dry wt	a) Controls 0.6 ug Se/g in diet b) 6.6 ug Se/g diet (some added as Na-selenite) c) 11.4 ug Se/g diet (some added as Na-selenite) d) Overt lesions of nephrocalcinosis. Diets consumed for 24 wk. Initial body wt 0.6+/-0.1 g. Juveniles. d) had significantly higher levels. Canada, Ontario AAS

LIVER; KIDNEYS; FISHES; SELENIUM; CALCIUM; DIETS; MAGNESIUM; CANADA; BLOOD PLASMA; AQUATIC; DELIBERATE EXPOSURE
Hicks, B.D.; Hilton, J.W.; Ferguson, H.W. 1984 Journal of Fish Diseases 7:379-389

Whiting, Pacific
MERLUCCIUS PRODUCTUS

Tissue	Cases Exposure Route	Range	Mean	General Information
4477 Muscle	a) 20 b) 32 Ingestion	a) Not given b) Not given	a) 283+/-48 ug/g b) 333+/-40 ug/g Wet wt	a) Near Astoria, OR, mean wt 873+/-246 g b) Refrigerated 2 d in seawater, Astoria, OR, 937+/-227 g. Interspecies variations among 7 species studied. Pacific Ocean ES

FISHES; BIOLOGICAL MONITORING; PACIFIC OCEAN; ALUMINUM; BARIUM; CALCIUM; CHROMIUM; COPPER; IRON; MERCURY; POTASSIUM; LITHIUM; MAGNESIUM; MANGANESE; SODIUM; PHOSPHORUS; STRONTIUM; ZINC; AQUATIC; ENVIRONMENTAL EXPOSURE; WATER POLLUTION; FOOD CONTAMINATION; MUSCLES
Teeny, F.M.; Gauglitz, E.J., Jr.; Hall, A.S.; Houle, C.R. 1984 Journal of Agricultural and Food Chemistry 32:852-855

Manganese
7439-96-5
Mn
AtW 54.9380, MP 1244 C, BP 2095 C, VP 1 mm Hg at 1292 C, 10 mm Hg at 1510 C

Beaver
CASTOR CANADENSIS

Tissue	Cases Exposure Route	Range	Mean	General Information
4478 Intestine	4 Ingestion	Not given	22.8+/-25.6 ug/g	Undisturbed watershed. Specimens from fur trapper. Canada, Ontario, Georgian Bay, Tadenac Lake ES

(next page)

Manganese
7439-96-5
Mn
AtW 54.9380, MP 1244 C, BP 2095 C, VP 1 mm Hg at 1292 C, 10 mm Hg at 1510 C

Beaver
CASTOR CANADENSIS

(continued)

Tissue	Cases Exposure Route	Range	Mean	General Information
4479 Kidney	4 Ingestion	Not given	3.4+/-1.7 ug/g	Undisturbed watershed. Specimens from fur trapper. Canada, Ontario, Georgian Bay, Tadenac Lake ES
4480 Liver	4 Ingestion	Not given	3.7+/-1.4 ug/g	Undisturbed watershed. Specimens from fur trapper. Canada, Ontario, Georgian Bay, Tadenac Lake ES
4481 Muscle	4 Ingestion	Not given	0.4+/-0.2 ug/g	Undisturbed watershed. Specimens from fur trapper. Canada, Ontario, Georgian Bay, Tadenac Lake ES

BEAVERS; OTTERS; RACCOONS; CANADA; BIOACCUMULATION; BIOMAGNIFICATION; SELENIUM; IRON; COPPER; CADMIUM; CALCIUM; ALUMINUM; MAGNESIUM; MANGANESE; SODIUM; NICKEL; PHOSPHORUS; ZINC; POTASSIUM; DETOXIFICATION; DIETS; LIVER; KIDNEYS; INTESTINES; MUSCLES; AQUATIC; TERRESTRIAL; ENVIRONMENTAL EXPOSURE; BIOLOGICAL MONITORING

Wren, C.D. 1984 Science of the Total Environment 34:177-184

Cattle
BOS sp.

Tissue	Cases Exposure Route	Range	Mean	General Information
4482 Bone	3 Injection Ingestion	a) Not given b) Not given c) Not given	a) 0.224% b) 0.370% c) 220% % of dose	a) Rib, 102 d after 0.574 and 0.593 mCi orally, 2 cases b) Femur, same 2 c) Rib and femur, 70 d after 0.0547 mCi IV, 1 case 402-533 kg Pie Noir cows. As Mn-54. 14.3% (oral) and 22.8% (IV) of body burden. Data available on other organs.

INTESTINES; LIVER; SPLEEN; URINE; MILK; MUSCLES; BONES; FEMUR; RIBS; SKIN; KIDNEYS; BLOOD; COBALT; IRON; MANGANESE; CHROMIUM; CATTLE; TERRESTRIAL; DELIBERATE EXPOSURE; LACTATION; RADIONUCLIDES

Van Bruwaene, R.; Gerber, G.B.; Kirchmann, R.; Colard, J.; Van Kerkom, J. 1984 Health Physics 46(5):1069-1082

Manganese
7439-96-5
Mn
AtW 54.9380, MP 1244 C, BP 2095 C, VP 1 mm Hg at 1292 C, 10 mm Hg at 1510 C

Cattle
BOS sp.

Tissue	Cases Exposure Route	Range	Mean	General Information
4483 Brain	a) 3 b) 4 c) 4 d) 3 e) 4 Ingestion	a) Not given b) Not given c) Not given d) Not given e) Not given	a) 1.36 ug/g b) 1.19 ug/g c) 1.34 ug/g d) 1.18 ug/g e) 1.30 ug/g Dry wt	a) Controls, 0 mg Pb/kg b) 6.25 mg Pb/kg c) 7.81 mg Pb/kg d) 9.77 mg Pb/kg e) 12.21 mg Pb/kg Daily dietary doses. 2 in c) survived 89 and 112 d, others, except controls, died within 24 d. Diarrhea Blindness, death AAS
4484 Heart	a) 3 b) 4 c) 4 d) 3 e) 4 Ingestion	a) Not given b) Not given c) Not given d) Not given e) Not given	a) 1.67 ug/g b) 1.17 ug/g c) 1.42 ug/g d) 1.61 ug/g e) 1.40 ug/g Dry wt	a) Controls, 0 mg Pb/kg b) 6.25 mg Pb/kg c) 7.81 mg Pb/kg d) 9.77 mg Pb/kg e) 12.21 mg Pb/kg Daily dietary doses. 2 in c) survived 89 and 112 d, others, except controls, died within 24 d. Diarrhea Blindness, death AAS

LIVER; KIDNEYS; SPLEEN; HEART; BRAIN; DELIBERATE EXPOSURE; ADULTS; CATTLE; METAL POISONING; AUTOPSIES; COPPER; LEAD; MANGANESE; IRON; ZINC; METALS; AGRICULTURE; BIOACCUMULATION; DIETS; ANIMAL FEEDS; TERRESTRIAL

Doyle, J.J.; Younger, R.L. 1984 Veterinary and Human Toxicology 26(3):201-204

Tissue	Cases Exposure Route	Range	Mean	General Information
4485 Kidney	a) 2 b) 1 Injection Ingestion	a) Not given b) Not given	a) 0.972x10(E-4)% b) 132x10(E-4)% % of dose/kg	a) 102 d after 0.574 and 0.593 mCi, oral b) 73 d after 0.0547 mCi IV 402-533 kg Pie Noir cows. As Mn-54. 1.12% (oral) and 1.05% (IV) of body burden. Data available on other organs.

INTESTINES; LIVER; SPLEEN; URINE; MILK; MUSCLES; BONES; FEMUR; RIBS; SKIN; KIDNEYS; BLOOD; COBALT; IRON; MANGANESE; CHROMIUM; CATTLE; TERRESTRIAL; DELIBERATE EXPOSURE; LACTATION; RADIONUCLIDES

Van Bruwaene, R.; Gerber, G.B.; Kirchmann, R.; Colard, J.; Van Kerkom, J. 1984 Health Physics 46(5):1069-1082

Manganese
7439-96-5
Mn
AtW 54.9380, MP 1244 C, BP 2095 C, VP 1 mm Hg at 1292 C, 10 mm Hg at 1510 C

Cattle
BOS sp.

Tissue	Cases Exposure Route	Range	Mean	General Information
4486 Kidney	a) 3 b) 4 c) 4 d) 3 e) 4 Ingestion	a) Not given b) Not given c) Not given d) Not given e) Not given	a) 6.00 ug/g b) 3.61 ug/g c) 4.23 ug/g d) 4.10 ug/g e) 3.30 ug/g Dry wt	a) Controls, 0 mg Pb/kg b) 6.25 mg Pb/kg c) 7.81 mg Pb/kg d) 9.77 mg Pb/kg e) 12.21 mg Pb/kg Daily dietary doses. 2 in c) survived 89 and 112 d, others, except controls, died within 24 d. Diarrhea Blindness, death AAS
LIVER; KIDNEYS; SPLEEN; HEART; BRAIN; DELIBERATE EXPOSURE; ADULTS; CATTLE; METAL POISONING; AUTOPSIES; COPPER; LEAD; MANGANESE; IRON; ZINC; METALS; AGRICULTURE; BIOACCUMULATION; DIETS; ANIMAL FEEDS; TERRESTRIAL				
Doyle, J.J.; Younger, R.L. 1984 Veterinary and Human Toxicology 26(3):201-204				

Tissue	Cases Exposure Route	Range	Mean	General Information
4487 Liver	a) 2 b) 1 Injection Ingestion	a) Not given b) Not given	a) 0.510x10(E-4)% b) 23.6x10(E-4)% % of dose/kg	a) 102 d after 0.574 and 0.593 mCi, oral b) 70 d after 0.0547 mCi IV 402-533 kg Pie Noir cows. As Mn-54. 3.41% (oral) and 1.08% (IV) of body burden. Data available on other organs.
INTESTINES; LIVER; SPLEEN; URINE; MILK; MUSCLES; BONES; FEMUR; RIBS; SKIN; KIDNEYS; BLOOD; COBALT; IRON; MANGANESE; CHROMIUM; CATTLE; TERRESTRIAL; DELIBERATE EXPOSURE; LACTATION; RADIONUCLIDES				
Van Bruwaene, R.; Gerber, G.B.; Kirchmann, R.; Colard, J.; Van Kerkom, J. 1984 Health Physics 46(5):1069-1082				

Tissue	Cases Exposure Route	Range	Mean	General Information
4488 Liver	a) 3 b) 4 c) 4 d) 3 e) 4 Ingestion	a) Not given b) Not given c) Not given d) Not given e) Not given	a) 11.50 ug/g b) 12.44 ug/g c) 10.88 ug/g d) 13.67 ug/g e) 10.88 ug/g Dry wt	a) Controls, 0 mg Pb/kg b) 6.25 mg Pb/kg c) 7.81 mg Pb/kg d) 9.77 mg Pb/kg e) 12.21 mg Pb/kg Daily dietary doses. 2 in c) survived 89 and 112 d, others, except controls, died within 24 d. Diarrhea Blindness, death AAS
LIVER; KIDNEYS; SPLEEN; HEART; BRAIN; DELIBERATE EXPOSURE; ADULTS; CATTLE; METAL POISONING; AUTOPSIES; COPPER; LEAD; MANGANESE; IRON; ZINC; METALS; AGRICULTURE; BIOACCUMULATION; DIETS; ANIMAL FEEDS; TERRESTRIAL				
Doyle, J.J.; Younger, R.L. 1984 Veterinary and Human Toxicology 26(3):201-204				

Manganese
7439-96-5
Mn
AtW 54.9380, MP 1244 C, BP 2095 C, VP 1 mm Hg at 1292 C, 10 mm Hg at 1510 C

Cattle
BOS sp.

Tissue	Cases Exposure Route	Range	Mean	General Information
4489 Milk	a) 2 b) 1 Injection Ingestion	a) Not given b) Not given	a) 0.007% b) 2.7% % of dose	a) 102 d after 0.574 and 0.593 mCi, oral b) 70 d after 0.0547 mCi IV 402-533 kg Pie Noir cows. As Mn-54. Data available on other organs.
4490 Muscle	a) 2 b) 1 Injection Ingestion	a) Not given b) Not given	a) 0.224x10(E-4)% b) 64.8x10(E-4)% % of dose/kg	a) 102 d after 0.574 and 0.593 mCi, oral b) 70 d after 0.0547 mCi IV 402-533 kg Pie Noir cows. As Mn-54. 36.1% (oral) and 71.8% (IV) of body burden. Data available on other organs.
4491 Skin	a) 2 b) 1 Injection Ingestion	a) Not given b) Not given	a) 0.345x10(E-4)% b) 14.2x10(E-4)% % of dose/kg	a) 102 d after 0.574 and 0.593 mCi, oral b) 70 d after 0.0547 mCi IV 402-533 kg Pie Noir cows. As Mn-54. 23.8% (oral) and 6.7% (IV) of body burden. Data available on other organs.

INTESTINES; LIVER; SPLEEN; URINE; MILK; MUSCLES; BONES; FEMUR; RIBS; SKIN; KIDNEYS; BLOOD; COBALT; IRON; MANGANESE; CHROMIUM; CATTLE; TERRESTRIAL; DELIBERATE EXPOSURE; LACTATION; RADIONUCLIDES

Van Bruwaene, R.; Gerber, G.B.; Kirchmann, R.; Colard, J.; Van Kerkom, J. 1984 Health Physics 46(5):1069-1082

Tissue	Cases Exposure Route	Range	Mean	General Information
4492 Spleen	a) 3 b) 4 c) 4 d) 3 e) 4 Ingestion	a) Not given b) Not given c) Not given d) Not given e) Not given	a) 0.91 ug/g b) 0.98 ug/g c) 1.28 ug/g d) 1.39 ug/g e) 0.91 ug/g Dry wt	a) Controls, 0 mg Pb/kg b) 6.25 mg Pb/kg c) 7.81 mg Pb/kg d) 9.77 mg Pb/kg e) 12.21 mg Pb/kg Daily dietary doses. 2 in c) survived 89 and 112 d, others, except controls, died within 24 d. Diarrhea Blindness, death AAS

LIVER; KIDNEYS; SPLEEN; HEART; BRAIN; DELIBERATE EXPOSURE; ADULTS; CATTLE; METAL POISONING; AUTOPSIES; COPPER; LEAD; MANGANESE; IRON; ZINC; METALS; AGRICULTURE; BIOACCUMULATION; DIETS; ANIMAL FEEDS; TERRESTRIAL

Doyle, J.J.; Younger, R.L. 1984 Veterinary and Human Toxicology 26(3):201-204

Tissue	Cases Exposure Route	Range	Mean	General Information
4493 Urine	2 Ingestion	Not given	0.0013% of dose	102 d after 0.574 and 0.593 mCi, oral. 402-533 kg Pie Noir cows. Data available on other organs.

INTESTINES; LIVER; SPLEEN; URINE; MILK; MUSCLES; BONES; FEMUR; RIBS; SKIN; KIDNEYS; BLOOD; COBALT; IRON; MANGANESE; CHROMIUM; CATTLE; TERRESTRIAL; DELIBERATE EXPOSURE; LACTATION; RADIONUCLIDES

Van Bruwaene, R.; Gerber, G.B.; Kirchmann, R.; Colard, J.; Van Kerkom, J. 1984 Health Physics 46(5):1069-1082

Manganese
7439-96-5
Mn
AtW 54.9380, MP 1244 C, BP 2095 C, VP 1 mm Hg at 1292 C, 10 mm Hg at 1510 C

Chicken
GALLUS GALLUS

Tissue	Cases Exposure Route	Range	Mean	General Information
4494 Blood, plasma	16 Ingestion	3.37-10.04 ug/dl	Not applicable	Dose response curve, linear from 0-3000 ppm. Added as dietary supplement. Florida AAS
4495 Bone	16 Ingestion	9.5-67.4 ppm Ash wt	Not applicable	Dose response curve, linear from 0-3000 ppm. Added as dietary supplement. Florida AAS
4496 Kidney	16 Ingestion	8.9-28.7 ppm Dry wt	Not applicable	Dose response curve, linear from 0-3000 ppm. Added as dietary supplement. Florida AAS
4497 Liver	16 Ingestion	11.3-18.7 ppm Dry wt	Not applicable	Dose response curve, linear from 0-3000 ppm. Added as dietary supplement. Florida AAS
4498 Muscle	16 Ingestion	0.91-1.38 ppm Dry wt	Not applicable	Dose response curve, linear from 0-3000 ppm. Added as dietary supplement. Florida AAS

LIVER; KIDNEYS; BONES; MUSCLES; BLOOD PLASMA; CHICKENS; TERRESTRIAL; DELIBERATE EXPOSURE; FLORIDA; NUTRITIONAL DISORDERS; MANGANESE; BIOACCUMULATION; ANIMAL FEEDS; FOOD ADDITIVES

Black, J.R.; Ammerman, C.B; Henry, P.R.; Miles, R.D. 1984 Nutrition Reports International 29(4):807-814

Clam
DONAX SERRA

Tissue	Cases Exposure Route	Range	Mean	General Information
4499 Body	251	1.15-3.69 ug/g Wet wt	Not applicable	Collected 8/78-8/79 for national marine pollution monitoring program. Range of means. South Africa

BODY; AQUATIC; ENVIRONMENTAL EXPOSURE; SOUTH AFRICA; METALS; ZINC; CADMIUM; COPPER; LEAD; IRON; MANGANESE; NICKEL; COBALT; CHROMIUM; BIOINDICATORS; BIOLOGICAL MONITORING; BIOACCUMULATION; WATER POLLUTION; MOLLUSKS

Watling, H.R.; Watling, R.J. 1983 Bulletin of Environmental Contamination and Toxicology 31:331-358

Manganese

7439-96-5
Mn
AtW 54.9380, MP 1244 C, BP 2095 C, VP 1 mm Hg at 1292 C, 10 mm Hg at 1510 C

Clam, Asiatic
CORBICULA MANILENSIS

Tissue	Cases Exposure Route	Range	Mean	General Information
4500 Body, whole	9	2.0-375 ug/g Dry wt	20 ug/g Dry wt Median	August 1979-May 1980, sampling dates. More concentrated in sediments than in tissue. No correlation between sediment and clam residues. Non point sources. No significant seasonal, temporal or spatial variability reported. Florida, Apalachicola River AAS

BODY; ASIATIC CLAM; AQUATIC; ENVIRONMENTAL EXPOSURE; FLORIDA; TRACE ELEMENTS; PESTICIDES; POLYCHLORINATED BIPHENYLS; CHROMIUM; COPPER; LEAD; MANGANESE; MERCURY; ZINC; DDD; ORGANOPHOSPHATES; DDE; DDT; DIELDRIN; HEPTACHLOR EPOXIDE; INSECTICIDES; GEOLOGY
Elder, J.F.; Mattraw, H.C. 1984 Archives of Environmental Contamination and Toxicology 13:453-469

Clam, soft-shell
MYA ARENARIA

Tissue	Cases Exposure Route	Range	Mean	General Information
4501 Muscle	31	Not given	24.4+/-22.8 ug/g Wet wt	Total soft tissues. Collected 1970-74 Oregon, coast AAS

CRUSTACEANS; HEPATOPANCREAS; MOLLUSKS; OREGON ; MUSCLES; BIOACCUMULATION; WATER POLLUTION; CADMIUM; COPPER; IRON; MANGANESE; MERCURY; ZINC
Caldwell, R.S.; Buhler, D.R. 1983 Archives of Environmental Contamination and Toxicology 12:15-23

Cockle
CLINOCARDIUM NUTTALLII

Tissue	Cases Exposure Route	Range	Mean	General Information
4502 Muscle	32	Not given	6.02+or-4.45 ug/g Wet wt	Total soft tissues. Collected 1970-74 Oregon, coast AAS

CRUSTACEANS; HEPATOPANCREAS; MOLLUSKS; OREGON ; MUSCLES; BIOACCUMULATION; WATER POLLUTION; CADMIUM; COPPER; IRON; MANGANESE; MERCURY; ZINC
Caldwell, R.S.; Buhler, D.R. 1983 Archives of Environmental Contamination and Toxicology 12:15-23

Manganese
7439-96-5
Mn
AtW 54.9380, MP 1244 C, BP 2095 C, VP 1 mm Hg at 1292 C, 10 mm Hg at 1510 C

Cod, Pacific
GADUS MACROCEPHALUS

Tissue	Cases Exposure Route	Range	Mean	General Information
4508 Muscle	Ingestion	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given	a) 0.061+/-0.026 ug/g b) 0.070+/-0.023 ug/g c) 0.090+/-0.017 ug/g d) 0.007+/-0.002 mg/100 g e) 0.068+/-0.027 ug/g f) 0.053+/-0.016 ug/g Wet wt	a) Near Cape Flattery, WA, 50 fish, mean wt 2623+/-1174 g b) Cape Sarichef, AK, 12 fish, 1148+/-649 g c) Cape Ommaney, AK, 11 fish, 798+/-407 g d) Overall mean, combined sites e) Nape section of fish, 30 fillets f) Tail section of fish, 30 fillets. Slightly higher levels in nape indicated differential distribution. Pacific Ocean ES
FISHES; BIOLOGICAL MONITORING; PACIFIC OCEAN; ALUMINUM; BARIUM; CALCIUM; CHROMIUM; COPPER; IRON; MERCURY; POTASSIUM; LITHIUM; MAGNESIUM; MANGANESE; SODIUM; PHOSPHORUS; STRONTIUM; ZINC; AQUATIC; ENVIRONMENTAL EXPOSURE; WATER POLLUTION; FOOD CONTAMINATION; MUSCLES				
Tenny, F.M.; Gauglitz, E.J., Jr.; Hall, A.S.; Houle, C.R. 1984 Journal of Agricultural and Food Chemistry 32:852-855				

Crab, Dungeness
CANCER MAGISTER

Tissue	Cases Exposure Route	Range	Mean	General Information
4504 Hepatopancreas	59	Not given	6.67+or-6.79 ug/g Wet wt	Collected 1970-74 Oregon, coast AAS
4508 Muscle	73	Not given	1.28+or-0.754 ug/g Wet wt	Collected 1970-74 Oregon, coast AAS
CRUSTACEANS; HEPATOPANCREAS; MOLLUSKS; OREGON ; MUSCLES; BIOACCUMULATION; WATER POLLUTION; CADMIUM; COPPER; IRON; MANGANESE; MERCURY; ZINC				
Caldwell, R.S.; Buhler, D.R. 1983 Archives of Environmental Contamination and Toxicology 12:15-23				

Dogfish
SCYLIORHYNUS CANICULA

Tissue	Cases Exposure Route	Range	Mean	General Information
4506 Liver	a) 9 b) 8 c) 8	a) Not given b) Not given c) Not given	a) 2.4 ug/g b) 2.0 ug/g c) 1.0 ug/g Dry wt Estimated from graph	a) Controls b) 10 ppm Zn for 3 wk c) 80 ppm Zn for 24 hr Wt 150-300 g No toxic symptoms at 10 ppm, overturning at 80 ppm. AAS
SPAIN; FISHES; BIOACCUMULATION; LIVER; ZINC; COPPER; MANGANESE				
Sanpera, C.; Vallribera, M.; Crespo, S. 1983 Bulletin of Environmental Contamination and Toxicology 31:415-417				

Manganese
7439-96-5
Mn
AtW 54.9380, MP 1244 C, BP 2095 C, VP 1 mm Hg at 1292 C, 10 mm Hg at 1510 C

Duck, long-tailed
CLANGULA HYEMALIS

Tissue	Cases Exposure Route	Range	Mean	General Information
4507 Feathers	a) 28 b) 15 c) 6	a) 4.2-14 mg/kg b) 1.5-3.5 mg/kg c) 2.8-3.9 mg/kg Dry wt	a) 7.9+or-1.8 mg/kg b) 2.1+or-0.7 mg/kg c) 3.3+or-0.6 mg/kg Dry wt	a) Males b) Males, oiled c) Females Collected 1980-81. Composite samples Poland, Gdansk Bay AAS
4508 Heart	a) 50 b) 40	a) 0.38-0.49 mg/kg b) 0.36-0.67 mg/kg Wet wt	a) 0.44+or-0.05 mg/kg b) 0.52+or-0.15 mg/kg Wet wt	a) Males b) Females Collected 1980-81. Composite samples Poland, Gdansk Bay AAS
4509 Liver	a) 50 b) 40	a) 0.8-6.4 mg/kg b) 2.6-5.0 mg/kg Wet wt	a) 4.2+or-0.8 mg/kg b) 4.0+or-0.7 mg/kg Wet wt	a) Males b) Females Collected 1980-81. Composite samples Poland, Gdansk Bay AAS
4510 Muscle	90	a) 0.053-0.39 mg/kg b) 0.14-0.50 mg/kg c) 0.63-0.73 mg/kg d) 0.4-1.4 mg/kg Wet wt	a) 0.19+or-0.03 mg/kg b) 0.30+or-0.05 mg/kg c) 0.68+or-0.05 mg/kg d) 1.0+or-0.3 mg/kg Wet wt	a) Males, breast b) Females, breast c) Males, leg d) Females, leg Collected 1980-81. Composite samples Poland, Gdansk Bay AAS
4511 Stomach	a) 50 b) 40	a) 0.39-7.7 mg/kg b) 7.2-8.5 mg/kg Wet wt	a) 4.0+or-1.3 mg/kg b) 7.9+or-0.6 mg/kg Wet wt	a) Males b) Females Collected 1980-81. Composite samples Poland, Gdansk Bay AAS

POLAND; BIRDS; IRON; ZINC; MANGANESE; COPPER; LEAD; CADMIUM; COBALT; NICKEL; BIOACCUMULATION; LIVER; MUSCLES; HEART; STOMACH; FEATHERS; AQUATIC; WATERFOWL; ENVIRONMENTAL EXPOSURE

Szefer, P.; Falandysz, J. 1983 Science of the Total Environment 29:269-276

Manganese
7439-96-5
Mn
AtW 54.9380, MP 1244 C, BP 2095 C, VP 1 mm Hg at 1292 C, 10 mm Hg at 1510 C

Earthworm
PHERETIMA HILGENDORFI

Tissue	Cases Exposure Route	Range	Mean	General Information
4512 Body, whole	37	3.67-40.6 ug/wet g	16.9-8.22 ug/wet g	Relatively high levels found in pre-clitellar region. Total burden increased with increased body length up to 18 cm, thereafter it remained constant. Accumulation depended upon metabolic turnover. Japan, Matsuyama City, Tsubaki shrine AAS
IRON; MANGANESE; ZINC; COPPER; LEAD; NICKEL; COBALT; ARSENIC; MERCURY; CADMIUM; BIOACCUMULATION; SOILS; BIOINDICATORS; LAND POLLUTION; EARTHWORMS; BODY; TERRESTRIAL; ENVIRONMENTAL EXPOSURE; JAPAN; METALS; BIOLOGICAL MONITORING				
Honda, K.; Nasu, T.; Tatsukawa, R. 1984 Archives of Environmental Contamination and Toxicology 13:427-432				

Koala
PHASCOLARCTOS CINEREUS (Goldfuss)

Tissue	Cases Exposure Route	Range	Mean	General Information
4513 Liver	17	Not given	0.20+/-0.03 mmol/kg	Dried liver. Mean age class 3.8+/-0.3 (1 = weanling, 7 = full grown, mature). Levels stable with age. Australia, Victoria, East Gippsland and French Island AAS
LIVER; COPPER; MANGANESE; ZINC; COBALT; BLOOD PLASMA; KOALAS; AUSTRALIA; DIETS; TERRESTRIAL; ENVIRONMENTAL EXPOSURE				
McOrist, S.; Thomas, K.W. 1984 Journal of Wildlife Diseases 20(3):220-225				

Mackerel, Atka
PLEUROGRAMMUS MONOPTERYGIUS

Tissue	Cases Exposure Route	Range	Mean	General Information
4514 Muscle	20 Ingestion	Not given	0.111+/-0.020 ug/g Wet wt	Off Kodiak Island, AK. Mean wt 461+/-156 g Pacific Ocean ES
FISHES; BIOLOGICAL MONITORING; PACIFIC OCEAN; ALUMINUM; BARIUM; CALCIUM; CHROMIUM; COPPER; IRON; MERCURY; POTASSIUM; LITHIUM; MAGNESIUM; MANGANESE; SODIUM; PHOSPHORUS; STRONTIUM; ZINC; AQUATIC; ENVIRONMENTAL EXPOSURE; WATER POLLUTION; FOOD CONTAMINATION; MUSCLES				
Teeny, F.M.; Gauglitz, E.J., Jr.; Hall, A.S.; Houle, C.R. 1984 Journal of Agricultural and Food Chemistry 32:852-855				

Otter
LUTRA CANADENSIS

Tissue	Cases Exposure Route	Range	Mean	General Information
4515 Intestine	4 Ingestion	Not given	0.[illegible]+/-0.5 ug/g	Undisturbed watershed. Specimens from fur trapper. Canada, Ontario, Georgian Bay, Tadenac Lake ES

(next page)

Manganese
7439-96-5
Mn
AtW 54.9380, MP 1244 C, BP 2096 C, VP 1 mm Hg at 1292 C, 10 mm Hg at 1510 C

Otter
LUTRA CANADENSIS

(continued)

Tissue	Cases Exposure Route	Range	Mean	General Information
4516 Kidney	4 Ingestion	Not given	0.6+/-0.2 ug/g	Undisturbed watershed. Specimens from fur trapper. Canada, Ontario, Georgian Bay, Tadenac Lake ES
4517 Liver	4 Ingestion	Not given	2.9+/-0.2 ug/g	Undisturbed watershed. Specimens from fur trapper. Canada, Ontario, Georgian Bay, Tadenac Lake ES
4518 Muscle	4 Ingestion	Not given	0.5+/-0.3 ug/g	Undisturbed watershed. Specimens from fur trapper. Canada, Ontario, Georgian Bay, Tadenac Lake ES

BEAVERS; OTTERS; RACCOONS; CANADA; BIOACCUMULATION; BIOMAGNIFICATION; SELENIUM; IRON; COPPER; CADMIUM; CALCIUM; ALUMINUM; MAGNESIUM; MANGANESE; SODIUM; NICKEL; PHOSPHORUS; ZINC; POTASSIUM; DETOXIFICATION; DIETS; LIVER; KIDNEYS; INTESTINES; MUSCLES; AQUATIC; TERRESTRIAL; ENVIRONMENTAL EXPOSURE; BIOLOGICAL MONITORING

Wren, C.D. 1984 Science of the Total Environment 34:177-184

Pollock, walleye
THERAGRA CHALCOGRAMMA

Tissue	Cases Exposure Route	Range	Mean	General Information
4519 Muscle	Ingestion	a) Not given b) Not given c) Not given d) Not given	a) 0.047+/-0.014 ug/g b) 0.526+/-0.163 ug/g c) 0.077+/-0.006 ug/g d) 0.017+/-0.005 mg/100 g Wet wt	a) Caught in Bering Sea, AK, 20 fish, mean wt 965+/-852 g b) Shelikof Strait, AK, 10 fish, 1300+/-488 g c) Cape Ommaney, AK, 12 fish, 328+/-223 g d) Overall mean, combined sites Site variation in levels, b) 6 X higher than a), c). Pacific Ocean ES

FISHES; BIOLOGICAL MONITORING; PACIFIC OCEAN; ALUMINUM; BARIUM; CALCIUM; CHROMIUM; COPPER; IRON; MERCURY; POTASSIUM; LITHIUM; MAGNESIUM; MANGANESE; SODIUM; PHOSPHORUS; STRONTIUM; ZINC; AQUATIC; ENVIRONMENTAL EXPOSURE; WATER POLLUTION; FOOD CONTAMINATION; MUSCLES

Teeny, F.M.; Gauglitz, E.J., Jr.; Hall, A.S.; Houle, C.R. 1984 Journal of Agricultural and Food Chemistry 32:852-855

Manganese
7439-96-5
Mn
AtW 54.9380, MP 1244 C, BP 2095 C, VP 1 mm Hg at 1292 C, 10 mm Hg at 1510 C

Pomfret
BRAMA JAPONICA

Tissue	Cases Exposure Route	Range	Mean	General Information
4520 Muscle	24 Ingestion	Not given	0.072+/-0.015 ug/g Wet wt	Gulf of Alaska. Mean wt 1088+/-162 g Pacific Ocean ES

FISHES; BIOLOGICAL MONITORING; PACIFIC OCEAN; ALUMINUM; BARIUM; CALCIUM; CHROMIUM; COPPER; IRON; MERCURY; POTASSIUM; LITHIUM; MAGNESIUM; MANGANESE; SODIUM; PHOSPHORUS; STRONTIUM; ZINC; AQUATIC; ENVIRONMENTAL EXPOSURE; WATER POLLUTION; FOOD CONTAMINATION; MUSCLES
Teeny, F.M.; Gauglitz, E.J., Jr.; Hall, A.S.; Houle, C.R. 1984 Journal of Agricultural and Food Chemistry 32:852-855

Raccoon
PROCYON LOTOR

Tissue	Cases Exposure Route	Range	Mean	General Information
4521 Kidney	4 Ingestion	Not given	1.3+/-0.3 ug/g	Undisturbed watershed. Specimens from fur trapper. Canada, Ontario, Georgian Bay, Tadenac Lake ES
4522 Liver	4 Ingestion	Not given	3.1+/-0.6 ug/g	Undisturbed watershed. Specimens from fur trapper. Canada, Ontario, Georgian Bay, Tadenac Lake ES
4523 Muscle	4 Ingestion	Not given	0.4+/-0.3 ug/g	Undisturbed watershed. Specimens from fur trapper. Canada, Ontario, Georgian Bay, Tadenac Lake ES

BEAVERS; OTTERS; RACCOONS; CANADA; BIOACCUMULATION; BIOMAGNIFICATION; SELENIUM; IRON; COPPER; CADMIUM; CALCIUM; ALUMINUM; MAGNESIUM; MANGANESE; SODIUM; NICKEL; PHOSPHORUS; ZINC; POTASSIUM; DETOXIFICATION; DIETS; LIVER; KIDNEYS; INTESTINES; MUSCLES; AQUATIC; TERRESTRIAL; ENVIRONMENTAL EXPOSURE; BIOLOGICAL MONITORING
Wren, C.D. 1984 Science of the Total Environment 34:177-184

Shad, American
ALOSA SAPIDISSIMA

Tissue	Cases Exposure Route	Range	Mean	General Information
4524 Muscle	13 Ingestion	Not given	0.146+/-0.024 ug/g Wet wt	Near Seaside, OR. Mean wt 1089+/-251 g Pacific Ocean ES

FISHES; BIOLOGICAL MONITORING; PACIFIC OCEAN; ALUMINUM; BARIUM; CALCIUM; CHROMIUM; COPPER; IRON; MERCURY; POTASSIUM; LITHIUM; MAGNESIUM; MANGANESE; SODIUM; PHOSPHORUS; STRONTIUM; ZINC; AQUATIC; ENVIRONMENTAL EXPOSURE; WATER POLLUTION; FOOD CONTAMINATION; MUSCLES
Teeny, F.M.; Gauglitz, E.J., Jr.; Hall, A.S.; Houle, C.R. 1984 Journal of Agricultural and Food Chemistry 32:852-855

Manganese
7439-96-5
Mn
AtW 54.9380, MP 1244 C, BP 2095 C, VP 1 mm Hg at 1292 C, 10 mm Hg at 1510 C
Silkworm
BOMBYX MORI

Tissue	Cases Exposure Route	Range	Mean	General Information
4525 Alimentary canal	Ingestion	a) Not given b) Not given	a) 44.8+/-0.3 ug/g b) 33.7+/-3.3 ug/g Dry wt	a) Controls b) Treatment After diet containing no (controls), or 80 ug Cd/g wet wt, fed from hatching until 6th day of 5th instar. Japan AAS
4526 Fat body	Ingestion	a) Not given b) Not given	a) 2.14+/-0.39 ug/g b) 1.74+/-0.41 ug/g Dry wt	a) Controls b) Treatment After diet containing no (controls), or 80 ug Cd/g wet wt, fed from hatching until 6th day of 5th instar. Japan AAS
4527 Gonads	Ingestion	a) Not given b) Not given	a) 6.82 ug/g b) 7.14 ug/g Dry wt	a) Controls b) Treatment After diet containing no (controls), or 80 ug Cd/g wet wt, fed from hatching until 6th day of 5th instar. Japan AAS
4528 Head	Ingestion	a) Not given b) Not given	a) 15.7+/-0.6 ug/g b) 15.8+/-1.0 ug/g Dry wt	a) Controls b) Treatment After diet containing no (controls), or 80 ug Cd/g wet wt, fed from hatching until 6th day of 5th instar. Japan AAS
4529 Integument	Ingestion	a) Not given b) Not given	a) 11.6+/-1.2 ug/g b) 9.16+/-0.96 ug/g Dry wt	a) Controls b) Treatment After diet containing no (controls), or 80 ug Cd/g wet wt, fed from hatching until 6th day of 5th instar. Japan AAS
4530 Malpighian tubes	Ingestion	a) Not given b) Not given	a) 190+/-6 ug/g b) 186+/-20 ug/g Dry wt	a) Controls b) Treatment After diet containing no (controls), or 80 ug Cd/g wet wt, fed from hatching until 6th day of 5th instar. Japan AAS

Manganese
7439-96-5
Mn
AtW 54.9380, MP 1244 C, BP 2095 C, VP 1 mm Hg at 1292 C, 10 mm Hg at 1510 C

Silkworm
BOMBYX MORI

(continued)

Tissue	Cases Exposure Route	Range	Mean	General Information
4531 Silk gland	Ingestion	a) Not given b) Not given	a) 7.70+/-1.06 ug/g b) 9.45+/-0.98 ug/g Dry wt	a) Controls b) Treatment After diet containing no (controls), or 80 ug Cd/g wet wt, fed from hatching until 6th day of 5th instar. Japan AAS
4532 Trachea	Ingestion	a) Not given b) Not given	a) 30.6+/-1.0 ug/g b) 33.0+/-2.2 ug/g Dry wt	a) Controls b) Treatment After diet containing no (controls), or 80 ug Cd/g wet wt, fed from hatching until 6th day of 5th instar. Japan AAS

SILK GLAND; HEAD; TRACHEA; MALPIGHIAN TUBES; GASTROINTESTINAL TRACT; GONADS; FAT BODY; INTEGUMENT; DELIBERATE EXPOSURE; SILKWORMS; TERRESTRIAL; JAPAN; METAL POISONING; METALS; CADMIUM; ZINC; COPPER; CALCIUM; IRON; MAGNESIUM; MANGANESE; ALUMINUM; SODIUM; POTASSIUM; BIOACCUMULATION

Suzuki, K.T.; Aoki, Y.; Nishikawa, M.; Masui, H.; Matsubara, F. 1984 Comparative Biochemistry and Physiology 79C(2):249-253

Snail
BULLIA RHODOSTOMA

Tissue	Cases Exposure Route	Range	Mean	General Information
4533 Body	757	0.75-1.88 ug/g Wet wt	Not applicable	Collected 8/78-8/79 for national marine pollution monitoring program. Range of means. South Africa

BODY; AQUATIC; ENVIRONMENTAL EXPOSURE; SOUTH AFRICA; METALS; ZINC; CADMIUM; COPPER; LEAD; IRON; MANGANESE; NICKEL; COBALT; CHROMIUM; BIOINDICATORS; BIOLOGICAL MONITORING; BIOACCUMULATION; WATER POLLUTION; MOLLUSKS

Watling, H.R.; Watling, R.J. 1983 Bulletin of Environmental Contamination and Toxicology 31:331-338

Manganese
7439-96-5
Mn
AtW 54.9380, MP 1244 C, BP 2095 C, VP 1 mm Hg at 1292 C, 10 mm Hg at 1510 C

Sole, Dover
MICROSTOMUS PACIFICUS

Tissue	Cases Exposure Route	Range	Mean	General Information
4534 Muscle	Ingestion	a) Not given b) Not given c) Not given d) Not given	a) 0.046+/-0.023 ug/g b) 0.083+/-0.023 ug/g c) 0.063+/-0.026 ug/g d) 0.006+/-0.002 mg/100 g Wet wt	a) Caught near Newport, OR, 29 fish, mean wt 660+/-326 g b) Cape Ommaney, AK, 11 fish, 506+/-214 g c) Santa Cruz, CA, 10 fish, 212+/-68 g d) Overall mean, combined sites. Site variations in levels. Pacific Ocean ES

FISHES; BIOLOGICAL MONITORING; PACIFIC OCEAN; ALUMINUM; BARIUM; CALCIUM; CHROMIUM; COPPER; IRON; MERCURY; POTASSIUM; LITHIUM; MAGNESIUM; MANGANESE; SODIUM; PHOSPHORUS; STRONTIUM; ZINC; AQUATIC; ENVIRONMENTAL EXPOSURE; WATER POLLUTION; FOOD CONTAMINATION; MUSCLES

Teeny, F.M.; Gauglitz, E.J., Jr.; Hall, A.S.; Houle, C.R. 1984 Journal of Agricultural and Food Chemistry 32:852-855

Whiting, Pacific
MERLUCCIUS PRODUCTUS

Tissue	Cases Exposure Route	Range	Mean	General Information
4535 Muscle	a) 20 b) 32 Ingestion	a) Not given b) Not given	a) 0.103+/-0.026 ug/g b) 0.093+/-0.015 ug/g Wet wt	a) Near Astoria, OR, mean wt 873+/-246 g b) Refrigerated 2 d in seawater, Astoria, OR, 937+/-227 g. Interspecies variations among 7 species studied. Pacific Ocean ES

FISHES; BIOLOGICAL MONITORING; PACIFIC OCEAN; ALUMINUM; BARIUM; CALCIUM; CHROMIUM; COPPER; IRON; MERCURY; POTASSIUM; LITHIUM; MAGNESIUM; MANGANESE; SODIUM; PHOSPHORUS; STRONTIUM; ZINC; AQUATIC; ENVIRONMENTAL EXPOSURE; WATER POLLUTION; FOOD CONTAMINATION; MUSCLES

Teeny, F.M.; Gauglitz, E.J., Jr.; Hall, A.S.; Houle, C.R. 1984 Journal of Agricultural and Food Chemistry 32:852-855

Mercury
7439-97-6
Hg
AtW 200.59, MP -38.87 C, BP 356.72 C, VP 2X10(E-3) mm Hg at 25 C, 100 mm Hg at 260 C

Auk, Japanese
SYNTHLIBORAMPHUS WUMIZUSUME

Tissue	Cases Exposure Route	Range	Mean	General Information
4536 Feathers	5	1.7-2.9 ppm	Not given	Captured 1979. Hg discharged by Chisso Corporation's Minamata Factory until 1968. Collected on abdominal side of wings. Japan, Shiranui Sea, Minamata Bay

FEATHERS; BIRDS; TERRESTRIAL; ENVIRONMENTAL EXPOSURE; JAPAN; AQUATIC; MERCURY; INDUSTRIAL POLLUTION; WATER POLLUTION; BIOMAGNIFICATION; BIOACCUMULATION; BIOINDICATORS

Doi, R.; Ohno, H.; Harada, M. 1984 Science of the Total Environment 40:155-167

Mercury
7439-97-6
Hg
AtW 200.59, MP -38.87 C, BP 356.72 C, VP 2X10(E-3) mm Hg at 25 C, 100 mm Hg at 260 C

Auk, little
ALLE ALLE

Tissue	Cases Exposure Route	Range	Mean	General Information
4537 Liver	9 Ingestion	Not given	0.49+/-0.09 ug/g Wet wt	Shot waterfowl. Normal nutritional condition. Few juveniles. Lowest levels in waterfowl studied. Body wt 170 g. Norway, Svalbard, Spitsbergen AAS

LIVER; ADIPOSE TISSUE; MERCURY; PESTICIDE RESIDUES; DIETS; BIOACCUMULATION; NORWAY; BIOLOGICAL MONITORING; BIOMAGNIFICATION; BIPHENYL COMPOUNDS; AQUATIC; BIRDS; ENVIRONMENTAL EXPOSURE; WATERFOWL; WATER POLLUTION; FOOD CONTAMINATION; AUTOPSIES; DDE; HEXACHLOROBENZENE; CHLORINATED HYDROCARBONS
Norheim, G.; Kjos-Hanssen, B. 1984 Environmental Pollution (Series A) 33:143-152

Bass, striped
MORONE SAXATILIS

Tissue	Cases Exposure Route	Range	Mean	General Information
4538 Heart	1	Not given	5.58 mg/kg Wet wt	Collected Summer 1981, wt 15 kg, age 16 yr Nevada, Lahontan Reservoir AAS
4539 Liver	1	Not given	23.65 mg/kg Wet wt	Collected Summer 1981, wt 15 kg, age 16 yr Nevada, Lahontan Reservoir AAS
4540 Muscle	1	Not given	9.52 mg/kg Wet wt	Collected Summer 1981, wt 15 kg, age 16 yr Nevada, Lahontan Reservoir AAS

NEVADA; ADULTS; JUVENILES; BODY; HEART; MUSCLES; LIVER; ABDOMEN; EGGS; BIOACCUMULATION; FISHES; WATER POLLUTION; MERCURY; CRUSTACEANS
Cooper, J.J. 1983 Bulletin of Environmental Contamination and Toxicology 31:9-17

Bass, white
MORONE CHRYSOPS

Tissue	Cases Exposure Route	Range	Mean	General Information
4541 Body		Not given	0.11 mg/kg Wet wt	Collected Summer 1981. Composite sample, whole young of the year Nevada, Lahontan Reservoir AAS
4542 Heart		Not given	1.58 mg/kg Wet wt	Collected Summer 1981, composite sample Nevada, Lahontan Reservoir AAS

(next page)

Mercury
7439-97-6
Hg
AtW 200.59, MP -38.87 C, BP 356.72 C, VP 2X10(E-3) mm Hg at 25 C, 100 mm Hg at 260 C

Bass, white
MORONE CHRYSOPS

(continued)

Tissue	Cases Exposure Route	Range	Mean	General Information
4543 Liver		Not given	3.14 mg/kg Wet wt	Collected Summer 1981, composite sample Nevada, Lahontan Reservoir AAS
4544 Muscle	8	0.97-3.95 mg/kg Wet wt	2.45 mg/kg Wet wt	Collected Summer 1981, wt 43-257 g. Significant correlation between wt and Hg content Nevada, Lahontan Reservoir AAS
NEVADA; ADULTS; JUVENILES; BODY; HEART; MUSCLES; LIVER; ABDOMEN; EGGS; BIOACCUMULATION; FISHES; WATER POLLUTION; MERCURY; CRUSTACEANS				
Cooper, J.J. 1983 Bulletin of Environmental Contamination and Toxicology 31:9-17				

Becune
SPHYRAENA FORSTERI

Tissue	Cases Exposure Route	Range	Mean	General Information
4545 Muscle	5	a) 0.37-1.33 ppm b) 0.353-1.328 ppm	a) 0.708 ppm b) 0.688 ppm	a) Total Hg b) Methyl Hg Collected 1980. Whole ungutted fish, shoulder samples. Wt 3.3-4.6 kg Indian Ocean (W), Seychelles AAS
SEYCHELLES; INDIAN OCEAN; MUSCLES; BIOACCUMULATION; FISHES; WATER POLLUTION; MERCURY; MERCURY ORGANIC COMPOUNDS				
Matthews, A.D. 1983 Environmental Research 30:305-312				

Blackfish, Sacramento
ORTHODON MICROLEPIDOTUS

Tissue	Cases Exposure Route	Range	Mean	General Information
4546 Heart		Not given	0.19 mg/kg Wet wt	Collected Summer 1981, composite sample Nevada, Lahontan Reservoir AAS
4547 Muscle	5	0.44-1.92 mg/kg Wet wt	0.96 mg/kg Wet wt	Collected Summer 1981, wt 41-291 g Nevada, Lahontan Reservoir AAS
NEVADA; ADULTS; JUVENILES; BODY; HEART; MUSCLES; LIVER; ABDOMEN; EGGS; BIOACCUMULATION; FISHES; WATER POLLUTION; MERCURY; CRUSTACEANS				
Cooper, J.J. 1983 Bulletin of Environmental Contamination and Toxicology 31:9-17				

Mercury
7439-97-6
Hg
AtW 200.59, MP -38.87 C, BP 356.72 C, VP 2X10(E-3) mm Hg at 25 C, 100 mm Hg at 260 C

Bonito
EUTHYNNUS AFFINIS

Tissue	Cases Exposure Route	Range	Mean	General Information
4548 Muscle	5	a) 0.805-1.286 ppm b) 0.789-1.252 ppm	a) 1.098 ppm b) 1.586 ppm	a) Total Hg b) Methyl Hg Collected 1980. Whole, ungutted fish, shoulder samples. Positive correlation between Hg content and wt. Wt 4.5-6.1 kg Indian Ocean (W), Seychelles AAS
SEYCHELLES; INDIAN OCEAN; MUSCLES; BIOACCUMULATION; FISHES; WATER POLLUTION; MERCURY; MERCURY ORGANIC COMPOUNDS				
Matthews, A.D. 1983 Environmental Research 30:305-312				

Bourgeois
LUTJANUS SEBAE

Tissue	Cases Exposure Route	Range	Mean	General Information
4549 Muscle	6	a) 0.273-0.692 ppm b) 0.228-0.691 ppm	a) 0.497 ppm b) 0.445 ppm	a) Total Hg b) Methyl Hg Collected 1980. Gilled, gutted fish, shoulder samples. Positive correlation between Hg content and wt. Wt 9.6-13.0 kg Indian Ocean (W), Seychelles AAS
SEYCHELLES; INDIAN OCEAN; MUSCLES ; BIOACCUMULATION; FISHES; WATER POLLUTION; MERCURY; MERCURY ORGANIC COMPOUNDS				
Matthews, A.D. 1983 Environmental Research 30:305-312				

Buffalo, water
BOS sp.

Tissue	Cases Exposure Route	Range	Mean	General Information
4550 Lung	Inhalation	a) Not given b) Not given	a) 121,958+/-18,415 b) 124,813+/-18,849 Mg/kg	a) Orissa area b) West Bengal area Polluted industrial and mining areas. Controls from non-industrial regions had no gross pulmonary changes, no data given. Necropsies on food animals. India Lungs were dirty pink color mottled with black. 20 trace metals present. Location of particulates suggested paralysed clearance mechanisms. Aggregates of lymphocytes and dust-laden macrophages. X-ray floures
CATTLE; ENVIRONMENTAL EXPOSURE; AIR POLLUTION; INDUSTRIAL POLLUTION; TERRESTRIAL; MERCURY; IRON; ZINC; LEAD; LUNGS; INDIA; AUTOPSIES; FOOD CONTAMINATION; BIOLOGICAL MONITORING; COPPER; BIOINDICATORS; DUST; INHALATION				
Dogra, R.K.S.; Shanker, R.; Saxena, A.K.; Khanna, S.; Srivastava, S.N.; Shukla, L.J.; Zaidi, S.H. 1984 Environmental Pollution (Series A) 36:109-120				

Mercury
7439-97-6
Hg
AtW 200.59, MP -38.87 C, BP 356.72 C, VP 2X10(E-3) mm Hg at 25 C, 100 mm Hg at 260 C

Bullhead, brown
ICTALURUS NEBULOSUS

Tissue	Cases Exposure Route	Range	Mean	General Information
4551 Liver		Not given	0.21 mg/kg Wet wt	Collected Summer 1981, composite sample Nevada, Lahontan Reservoir AAS
4552 Muscle	2	0.95-1.09 mg/kg Wet wt	1.02 mg/kg Wet wt	Collected Summer 1981, wt 98-119 g Nevada, Lahontan Reservoir AAS

NEVADA; ADULTS; JUVENILES; BODY; HEART; MUSCLES; LIVER; ABDOMEN; EGGS; BIOACCUMULATION; FISHES; WATER POLLUTION; MERCURY; CRUSTACEANS
Cooper, J.J. 1983 Bulletin of Environmental Contamination and Toxicology 31:9-17

Carangue balo
CARANX GYMNOSTETHUS

Tissue	Cases Exposure Route	Range	Mean	General Information
4553 Muscle	5	a) 0.376-1.288 ppm b) 0.347-1.419 ppm	a) 0.841 ppm b) 0.819 ppm	a) Total Hg b) Methyl Hg Collected 1980. Whole, ungutted fish, shoulder samples. Positive correlation between Hg content and wt. Wt 3.3-10.5 kg Indian Ocean (W), Seychelles AAS

SEYCHELLES; INDIAN OCEAN; MUSCLES; BIOACCUMULATION; FISHES; WATER POLLUTION; MERCURY; MERCURY ORGANIC COMPOUNDS
Matthews, A.D. 1983 Environmental Research 30:305-312

Carp
CYPRINUS CARPIO

Tissue	Cases Exposure Route	Range	Mean	General Information
4554 Body		Not given	0.21 mg/kg Wet wt	Collected Summer 1981. Composite sample, whole young of the year Nevada, Lahontan Reservoir AAS
4555 Heart		Not given	0.17 mg/kg Wet wt	Collected Summer 1981, composite sample Nevada, Lahontan Reservoir AAS
4556 Liver		Not given	2.62 mg/kg Wet wt	Collected Summer 1981, composite sample Nevada, Lahontan Reservoir AAS

NEVADA; ADULTS; JUVENILES; BODY; HEART; MUSCLES; LIVER; ABDOMEN; EGGS; BIOACCUMULATION; FISHES; WATER POLLUTION; MERCURY; CRUSTACEANS
Cooper, J.J. 1983 Bulletin of Environmental Contamination and Toxicology 31:9-17

Mercury
7439-97-6
Hg
AtW 200.59, MP -38.87 C, BP 356.72 C, VP 2X10(E-3) mm Hg at 25 C, 100 mm Hg at 260 C

Carp
CYPRINUS CARPIO

Tissue	Cases Exposure Route	Range	Mean	General Information
4557 Muscle	3	0.71-2.34 mg/kg Wet wt	1.26 mg/kg Wet wt	Collected Summer 1981, wt 37-1146 g Nevada, Lahontan Reservoir AAS
NEVADA; ADULTS; JUVENILES; BODY; HEART; MUSCLES; LIVER ; ABDOMEN; EGGS; BIOACCUMULATION; FISHES; WATER POLLUTION; MERCURY; CRUSTACEANS				
Cooper, J.J. 1983 Bulletin of Environmental Contamination and Toxicology 31:9-17				

Catfish, channel
ICTALURUS PUNCTATUS

Tissue	Cases Exposure Route	Range	Mean	General Information
4558 Heart		Not given	1.13 mg/kg Wet wt	Collected Summer 1981, composite sample Nevada, Lahontan Reservoir AAS
4559 Liver		Not given	3.29 mg/kg Wet wt	Collected Summer 1981, composite sample Nevada, Lahontan Reservoir AAS
4560 Muscle	8	1.01-2.36 mg/kg Wet wt	1.48 mg/kg Wet wt	Collected Summer 1981, wt 56-994 g Nevada, Lahontan Reservoir AAS
NEVADA; ADULTS; JUVENILES; BODY; HEART; MUSCLES; LIVER; ABDOMEN; EGGS; BIOACCUMULATION; FISHES; WATER POLLUTION; MERCURY; CRUSTACEANS				
Cooper, J.J. 1983 Bulletin of Environmental Contamination and Toxicology 31:9-17				

Catfish, white
ICTALURUS CATUS

Tissue	Cases Exposure Route	Range	Mean	General Information
4561 Heart		Not given	0.72 mg/kg Wet wt	Collected Summer 1981, composite sample Nevada, Lahontan Reservoir AAS
4562 Liver		Not given	2.03 mg/kg Wet wt	Collected Summer 1981, composite sample Nevada, Lahontan Reservoir AAS

(next page)

Mercury
7439-97-6
Hg
AtW 200.59, MP -38.87 C, BP 356.72 C, VP 2X10(E-3) mm Hg at 25 C, 100 mm Hg at 260 C

Catfish, white
ICTALURUS CATUS

(continued)

Tissue	Cases Exposure Route	Range	Mean	General Information
4563 Muscle	8	0.69-2.34 mg/kg Wet wt	1.39 mg/kg Wet wt	Collected Summer 1981, wt 16-193 g. Significant positive correlation between wt and Hg content Nevada, Lahontan Reservoir AAS
NEVADA; ADULTS; JUVENILES; BODY; HEART; MUSCLES; LIVER; ABDOMEN; EGGS; BIOACCUMULATION; FISHES; WATER POLLUTION; MERCURY; CRUSTACEANS Cooper, J.J. 1983 Bulletin of Environmental Contamination and Toxicology 31:9-17				

Cattle
BOS sp.

Tissue	Cases Exposure Route	Range	Mean	General Information
4564 Kidney	178	<0.01-0.15 mg/kg Wet wt	Not given	From abattoirs in 10 selected 100-sq km areas representing a cross-section of industries. 135 samples below detection limit. Australia, Queensland AAS
4565 Liver	180	<0.01-0.03 mg/kg Wet wt	Not given	From abattoirs in 10 selected 100-sq km areas representing a cross-section of industries. 178 samples below detection limit. Australia, Queensland AAS
4566 Muscle	161	<0.01-0.02 mg/kg Wet wt	Not given	From abattoirs in 10 selected 100 sq-km areas representing a cross-section of industries. Australia, Queensland AAS
CATTLE; AUSTRALIA; KIDNEYS; LIVER; MUSCLES; ARSENIC; CADMIUM; CHROMIUM; COPPER; LEAD; MERCURY; SELENIUM; ZINC; BIOACCUMULATION; INDUSTRIAL AREAS Kramer, H.L.; Steiner, J.W.; Vallely, P.J. 1983 Bulletin of Environmental Contamination and Toxicology 30:588-594				

Mercury
7439-97-6
Hg
AtW 200.59, MP -38.87 C, BP 356.72 C, VP 2X10(E-3) mm Hg at 25 C, 100 mm Hg at 260 C

Clam, Asiatic
CORBICULA MANILENSIS

Tissue	Cases Exposure Route	Range	Mean	General Information
4567 Body, whole	9	<0.1-0.2 ug/g Dry wt	<0.1 ug/g Dry wt Median	August 1979-May 1980, sampling dates. More concentrated in sediments than in tissue. No correlation between sediment and clam residues. Non point sources. No significant seasonal, temporal or spatial variability reported. Florida, Apalachicola River AAS

BODY; ASIATIC CLAM; AQUATIC; ENVIRONMENTAL EXPOSURE; FLORIDA; TRACE ELEMENTS; PESTICIDES; POLYCHLORINATED BIPHENYLS; CHROMIUM; COPPER; LEAD; MANGANESE; MERCURY; ZINC; DDD; ORGANOPHOSPHATES; DDE; DDT; DIELDRIN; HEPTACHLOR EPOXIDE; INSECTICIDES; GEOLOGY
Elder, J.F.; Mattraw, H.C. 1984 Archives of Environmental Contamination and Toxicology 13:453-469

Clam, hard-shell
MERCENARIA MERCENARIA

Tissue	Cases Exposure Route	Range	Mean	General Information
4568 Body	a) 13 b) 10 c) 18 d) 128 e) 38 Ingestion	a) 0.006-0.034 ug/g b) 0.006-0.61 ug/g c) 0.003-0.017 ug/g d) 0.003-0.032 ug/g e) 0.003-0.042 ug/g Wet wt	a) 0.015 ug/g b) 0.018 ug/g c) 0.007 ug/g d) 0.009 ug/g e) 0.009 ug/g Wet wt	a) 1976 b) 1977 c) 1978 d) 1979 e) 1980 Data include soft-shell clam, MYA ARENARIA. Biological monitoring for heavy metals in shellfish 1976-1980. Residues were well below safe levels. No significant yearly trends. Maryland, Chesapeake Bay area, tributaries AAS

CLAMS; BLUE CRABS; SHELLFISH; CHESAPEAKE BAY; MARYLAND; BIOLOGICAL MONITORING; BIOCONCENTRATION; COPPER; ZINC; LEAD; CADMIUM; ARSENIC; MERCURY; CHROMIUM; WATER POLLUTION; FOOD CONTAMINATION; AQUATIC; MOLLUSKS; ENVIRONMENTAL EXPOSURE
Eisenberg, M.; Topping, J.J. 1984 Journal of Environmental Science and Health B19(7):649-671

Mercury
7439-97-6
Hg
AtW 200.59, MP -38.87 C, BP 356.72 C, VP 2X10(E-3) mm Hg at 25 C, 100 mm Hg at 260 C

Clam, soft-shell
MYA ARENARIA

Tissue	Cases Exposure Route	Range	Mean	General Information
4569 Body	a) 13 b) 10 c) 18 d) 123 e) 38 Ingestion	A) 0.006-0.034 ug/g b) 0.006-0.61 ug/g c) 0.003-0.017 ug/g d) 0.003-0.032 ug/g e) 0.003-0.042 ug/g Wet wt	a) 0.015 ug/g b) 0.018 ug/g c) 0.007 ug/g d) 0.009 ug/g e) 0.009 ug/g Wet wt	a) 1976 b) 1977 c) 1978 d) 1979 e) 1980 Data include hard-shell clam, MERCENARIA MERCENARIA. Biological monitoring for heavy metals in shellfish 1976-1980. Residues were well below safe levels. No significant yearly trends. Maryland, Chesapeake Bay area tributaries AAS
CLAMS; BLUE CRABS; SHELLFISH; CHESAPEAKE BAY; MARYLAND; BIOLOGICAL MONITORING; BIOCONCENTRATION; COPPER; ZINC; LEAD; CADMIUM; ARSENIC; MERCURY; CHROMIUM; WATER POLLUTION; FOOD CONTAMINATION; AQUATIC; MOLLUSKS; ENVIRONMENTAL EXPOSURE				
Eisenberg, M.; Topping, J.J. 1984 Journal of Environmental Science and Health B19(7):649-671				

Tissue	Cases Exposure Route	Range	Mean	General Information
4570 Muscle	139	Not given	0.028+/-0.018 ug/g Wet wt	Total soft tissues. Collected 1970-74 Oregon, coast AAS
CRUSTACEANS; HEPATOPANCREAS; MOLLUSKS; OREGON ; MUSCLES; BIOACCUMULATION; WATER POLLUTION; CADMIUM; COPPER; IRON; MANGANESE; MERCURY; ZINC				
Caldwell, R.S.; Buhler, D.R. 1983 Archives of Environmental Contamination and Toxicology 12:15-23				

Cockle
CLINOCARDIUM NUTTALLII

Tissue	Cases Exposure Route	Range	Mean	General Information
4571 Muscle	71	Not given	0.019+or-0.009 ug/g Wet wt	Total soft tissues. Collected 1970-74 Oregon, coast AAS
CRUSTACEANS; HEPATOPANCREAS; MOLLUSKS; OREGON ; MUSCLES; BIOACCUMULATION; WATER POLLUTION; CADMIUM; COPPER; IRON; MANGANESE; MERCURY; ZINC				
Caldwell, R.S.; Buhler, D.R. 1983 Archives of Environmental Contamination and Toxicology 12:15-23				

Mercury

7439-97-6
Hg
AtW 200.59, MP -38.87 C, BP 356.73 C, VP 2X10(E-3) mm Hg at 25 C, 100 mm Hg at 260 C

Cod, Pacific
GADUS MACROCEPHALUS

Tissue	Cases Exposure Route	Range	Mean	General Information
4572 Muscle	Ingestion	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given	a) 0.120+/-0.050 ug/g b) 0.031+/-0.020 ug/g c) 0.058+/-0.032 ug/g d) 0.102+/-0.042 ug/g e) 0.144+/-0.057 ug/g f) 0.137+/-0.046 ug/g Wet wt	a) Near Cape Flattery, WA, 50 fish, mean wt 2628+/-1174 g b) Cape Sarichef, AK, 12 fish, 1148+/-649 g c) Cape Ommaney, AK, 11 fish, 798+/-497 g d) Overall mean, combined sites e) Nape section of fish, 30 fillets f) Tail section of fish, 30 fillets. Low levels, means below FDA action level for food contamination. Slightly higher levels in nape indicated differential distribution. Pacific Ocean AAS
FISHES; BIOLOGICAL MONITORING; PACIFIC OCEAN; ALUMINUM; BARIUM; CALCIUM; CHROMIUM; COPPER; IRON; MERCURY; POTASSIUM; LITHIUM; MAGNESIUM; MANGANESE; SODIUM; PHOSPHORUS; STRONTIUM; ZINC; AQUATIC; ENVIRONMENTAL EXPOSURE; WATER POLLUTION; FOOD CONTAMINATION; MUSCLES				
Teeny, F.M.; Gauglitz, E.J., Jr.; Hall, A.S.; Houle, C.R. 1984 Journal of Agricultural and Food Chemistry 32:852-855				

Cormorant, Temminck's
PHALACROCORAX FILAMENTOSUS

Tissue	Cases Exposure Route	Range	Mean	General Information
4573 Feathers	1	Not given	7.9 ppm	Captured 1970. Hg discharged by Chisso Corporation's Minamata Factory until 1968. Collected from abdominal side of wings of stuffed specimens. Levels influenced by feeding habits: predatory mean+/-SD=3.6+/-2.9 ppm. Japan, Shiranui Sea
FEATHERS; BIRDS; TERRESTRIAL; ENVIRONMENTAL EXPOSURE; JAPAN; AQUATIC; MERCURY; INDUSTRIAL POLLUTION; WATER POLLUTION; BIOMAGNIFICATION; BIOACCUMULATION; BIOINDICATORS				
Doi, R.; Ohno, H.; Harada, M. 1984 Science of the Total Environment 40:155-167				

Crab, blue
CALLINECTES SAPIDUS

Tissue	Cases Exposure Route	Range	Mean	General Information
4574 Body	a) 8 b) 20 Ingestion	a) 0.016-0.031 ug/g b) 0.019-0.083 ug/g Wet wt	a) 0.024 ug/g b) 0.035 ug/g Wet wt	a) 1979 b) 1980 None collected 1976-1978. Biological monitoring for heavy metals in shellfish 1976-1980. Residues were well below safe levels. No significant yearly trends. Maryland, Chesapeake Bay area tributaries AAS
CLAMS; BLUE CRABS; SHELLFISH; CHESAPEAKE BAY; MARYLAND; BIOLOGICAL MONITORING; BIOCONCENTRATION; COPPER; ZINC; LEAD; CADMIUM; ARSENIC; MERCURY; CHROMIUM; WATER POLLUTION; FOOD CONTAMINATION; AQUATIC; MOLLUSKS; ENVIRONMENTAL EXPOSURE				
Eisenberg, M.; Topping, J.J. 1984 Journal of Environmental Science and Health B19(7):649-671				

Mercury

7439-97-6
Hg
AtW 200.59, MP -38.87 C, BP 356.72 C, VP 2X10(E-3) mm Hg at 25 C, 100 mm Hg at 260 C

Crab, Dungeness
CANCER MAGISTER

Tissue	Cases Exposure Route	Range	Mean	General Information
4575 Hepatopancreas	131	Not given	0.098+or-0.062 ug/g Wet wt	Collected 1970-74 Oregon, coast AAS
4576 Muscle	180	Not given	0.108+or-0.084 ug/g Wet wt	Collected 1970-74 Oregon, coast AAS

CRUSTACEANS; HEPATOPANCREAS; MOLLUSKS; OREGON ; MUSCLES; BIOACCUMULATION; WATER POLLUTION; CADMIUM; COPPER; IRON; MANGANESE; MERCURY; ZINC
Caldwell, R.S.; Buhler, D.R. 1983 Archives of Environmental Contamination and Toxicology 12:15-23

Crappie, white
POMOXIS ANNULARIS

Tissue	Cases Exposure Route	Range	Mean	General Information
4577 Heart		Not given	2.07 mg/kg Wet wt	Collected Summer 1981, composite sample Nevada, Lahontan Reservoir AAS
4578 Liver		Not given	8.25 mg/kg Wet wt	Collected Summer 1981, composite sample Nevada, Lahontan Reservoir AAS
4579 Muscle	7	0.15-2.40 mg/kg wet wt	2.05 mg/kg Wet wt	Collected Summer 1981, wt 38-673 g. Significant correlation between wt and Hg content Nevada, Lahontan Reservoir AAS

NEVADA; ADULTS; JUVENILES; BODY; HEART; MUSCLES; LIVER; ABDOMEN; EGGS; BIOACCUMULATION; FISHES; WATER POLLUTION; MERCURY; CRUSTACEANS
Cooper, J.J. 1983 Bulletin of Environmental Contamination and Toxicology 31:9-17

Crayfish
PACIFASTACUS sp.

Tissue	Cases Exposure Route	Range	Mean	General Information
4580 Abdomen	3	0.57-5.72 mg/kg Wet wt	2.60 mg/kg Wet wt	Collected Summer 1981, wt 14-52 g Nevada, Lahontan Reservoir AAS

NEVADA; ADULTS; JUVENILES; BODY; HEART; MUSCLES; LIVER; ABDOMEN; EGGS; BIOACCUMULATION; FISHES; WATER POLLUTION; MERCURY; CRUSTACEANS
Cooper, J.J. 1983 Bulletin of Environmental Contamination and Toxicology 31:9-17

Mercury
7439-97-6
Hg
AtW 200.59, MP -38.87 C, BP 356.72 C, VP 2X10(E-3) mm Hg at 25 C, 100 mm Hg at 260 C

Crayfish
PACIFASTACUS sp.

Tissue	Cases Exposure Route	Range	Mean	General Information
4581 Exoskeleton	a) 10 b) 7 c) 12 d) 8	a) Not given b) Not given c) Not given d) Not given	a) 0.040 ug/g b) 0.036 ug/g c) 0.033 ug/g d) 0.020 ug/g	a) Laboratory controls b) Confined near storm drain outfall for freeway runoff c) Retail market sample d) Near combined sewer overflow outfall Exposed for 14 days. Estimated from graph. Washington, Seattle, Lake Washington and Lake Union AAS
4582 Muscle	a) 10 b) 7 c) 12 d) 8	a) Not given b) Not given c) Not given d) Not given	a) 0.05 ug/g b) 0.096 ug/g c) 0.098 ug/g d) 0.01 ug/g	a) Laboratory controls b) Confined near storm drain outfall for freeway runoff c) Retail market sample d) Near combined sewer overflow outfall Exposed for 14 days. Levels per wt increased with size (age). a) significantly different from b) and d). Estimated from graph. Washington, Seattle, Lake Washington and Lake Union AAS

MUSCLES; ORGANS; EXOSKELETON; CRAYFISH; AQUATIC; ENVIRONMENTAL EXPOSURE; WASHINGTON; LEAD; CADMIUM; MERCURY; COPPER; METALS; BIOACCUMULATION; BIOMAGNIFICATION; BIOLOGICAL MONITORING; FOOD CONTAMINATION; SEWAGE; WATER POLLUTION

Stinson, M.D.; Eaton, D.L. 1983 Archives of Environmental Contamination and Toxicology 12:693-700

Curlew, Indian
NUMENIUS ARQUATA

Tissue	Cases Exposure Route	Range	Mean	General Information
4583 Feathers	2	0.8-1.2 ppm	Not given	a) Captured 1971-1972 b) 1971-1978 Hg discharged by Chisso Corporation's Minamata Factory until 1968. Collected from abdominal side of wings of stuffed specimens. Levels influenced by feeding habits: Omnivorous aquatic mean+/-SD=5.5+/-3.6 ppm. Japan, Shiranui Sea

FEATHERS; BIRDS; TERRESTRIAL; ENVIRONMENTAL EXPOSURE; JAPAN; AQUATIC; MERCURY; INDUSTRIAL POLLUTION; WATER POLLUTION; BIOMAGNIFICATION; BIOACCUMULATION; BIOINDICATORS

Doi, R.; Ohno, H.; Harada, M. 1984 Science of the Total Environment 40:155-167

Mercury
7439-97-6
Hg
AtW 200.59,MP -38.87 C, BP 356.72 C, VP 2X10(E-3) mm Hg at 25 C, 100 mm Hg at 260 C

Diver, pacific
GAVIA PACIFICA

Tissue	Cases Exposure Route	Range	Mean	General Information
4584 Feathers	2	6.7-7.9 ppm	Not given	Captured 1978. Collected on abdominal side of wings. Little industrial pollution, possible control values. Japan, Hokkaido, Nemuro City

FEATHERS; BIRDS; TERRESTRIAL; ENVIRONMENTAL EXPOSURE; JAPAN; AQUATIC; MERCURY; INDUSTRIAL POLLUTION; WATER POLLUTION; BIOMAGNIFICATION; BIOACCUMULATION; BIOINDICATORS
Doi, R.; Ohno, H.; Harada, M. 1984 Science of the Total Environment 40:155-167

Dolphin, striped
STENELLA COERULEOALBA

Tissue	Cases Exposure Route	Range	Mean	General Information
4585 Adipose	a) 28 b) 6	a) Not given b) Not given	a) 3.5+/-1.4 ug/g b) 0.12+/-0.18 ug/g Wet wt	a) Mature animals collected from 1977-80 b) Immature animals collected in 1977-78 Included methylmercury content. Maturity defined as females having ovaries with corpora lutea or albicans, or males having testes of 15.5 g or more. Pacific Ocean AAS
4586 Blood	9	Not given	1.2+/-0.2 ug/g Wet wt	Mature animals collected 1977-1980. Includes methylmercury content. Pacific Ocean AAS
4587 Brain	a) 7 b) 7	a) Not given b) Not given	a) 9.7+/-6.2 ug/g b) 2.3+/-1.2 ug/g Wet wt	a) Cerebrum b) Cerebellum Mature animals collected 1977-1980. Includes methylmercury content. Pacific Ocean AAS
4588 Diaphragm	15	Not given	10.1+/-4.5 ug/g Wet wt	Mature animals collected 1977-80. Includes methylmercury content. Pacific Ocean AAS
4589 Heart	a) 15 b) 4	a) Not given b) Not given	a) 6.1+/-1.6 ug/g b) 1.30+/-0.40 ug/g Wet wt	a) Mature animals collected from 1977-80 b) Immature animals collected in 1977-78 Included methylmercury content. Maturity defined as females having ovaries with corpora lutea or albicans, or males having testes of 15.5 g or more. Pacific Ocean AAS
4590 Intestine	15	Not given	6.1+/-2.0 ug/g Wet wt	Mature animals collected 1977-80. Includes methylmercury content. Pacific Ocean AAS

(next page)

Mercury
7439-97-6
Hg
AtW 200.59,MP -38.87 C, BP 356.72 C, VP 2X10(E-3) mm Hg at 25 C, 100 mm Hg at 260 C

Dolphin, striped
STENELLA COERULEOALBA

(continued)

Tissue	Cases Exposure Route	Range	Mean	General Information
4591 Kidney	a) 14 b) 5	a) Not given b) Not given	a) 14.7+/-6.6 ug/g b) 3.38+/-1.30 ug/g Wet wt	a) Mature animals collected from 1977-80 b) Immature animals collected in 1977-78 Included methylmercury content. Maturity defined as females having ovaries with corpora lutea or albicans, or males having testes of 15.5 g or more. Pacific Ocean AAS
4592 Liver	a) 15 b) 6	a) Not given b) Not given	a) 205+/-102 ug/g b) 5.81+/-2.76 ug/g Wet wt	a) Mature animals collected from 1977-80 b) Immature animals collected in 1977-78 Included methylmercury content. Maturity defined as females having ovaries with corpora lutea or albicans, or males having testes of 15.5 g or more. Pacific Ocean AAS
4593 Lung	15	Not given	17.1+/-14.0 ug/g Wet wt	Mature animals collected 1977-80. Includes methylmercury content. Pacific Ocean AAS
4594 Muscle	a) 26 b) 6	a) Not given b) Not given	a) 15.2+/-8.0 ug/g b) 1.27+/-0.22 ug/g Wet wt	a) Mature animals collected from 1977-80 b) Immature animals collected in 1977-78 Included methylmercury content. Maturity defined as females having ovaries with corpora lutea or albicans, or males having testes of 15.5 g or more. Pacific Ocean AAS
4595 Pancreas	a) 14 b) 5	a) Not given b) Not given	a) 15.2+/-10.8 ug/g b) 0.47+/-0.09 ug/g Wet wt	a) Mature animals collected from 1977-80 b) Immature animals collected in 1977-78 Included methylmercury content. Maturity defined as females having ovaries with corpora lutea or albicans, or males having testes of 15.5 g or more. Pacific Ocean AAS
4596 Spleen	a) 14 b) 5	a) Not given b) Not given	a) 22.6+/-16.1 ug/g b) 0.77+/-0.28 ug/g Wet wt	a) Mature animals collected from 1977-80 b) Immature animals collected in 1977-78 Included methylmercury content. Maturity defined as females having ovaries with corpora lutea or albicans, or males having testes of 15.5 g or more. Pacific Ocean AAS

(next page)

Mercury
7439-97-6
Hg
AtW 200.59,MP -38.87 C, BP 356.72 C, VP 2X10(E-3) mm Hg at 25 C, 100 mm Hg at 260 C

Dolphin, striped
STENELLA COERULEOALBA

(continued)

Tissue	Cases Exposure Route	Range	Mean	General Information
4597 Stomach	20	a) Not given b) Not given c) Not given	a) 7.2+/-2.5 ug/g b) 8.2+/-4.2 ug/g c) 0.95+/-0.22 ug/g Wet wt	a) First stomach, mature animals collected 1977-80, 15 cases b) Second stomach, mature animals collected 1977-80, 15 cases c) First stomach, immature animals collected 1977-78, 5 cases Includes methylmercury content. Maturity defined as females having ovaries with corpora lutea or albicans, or males having testes of 15.5 g or more. Pacific Ocean AAS

ADIPOSE TISSUE; MUSCLES; PANCREAS; SPLEEN; KIDNEYS; LIVER; STOMACH; INTESTINES; LUNGS; DIAPHRAGM; BRAIN; BLOOD; DOLPHINS; AQUATIC; ENVIRONMENTAL EXPOSURE; PACIFIC OCEAN; JUVENILES; ADULTS; MERCURY; METHYLMERCURY; SELENIUM; METALS; BIOACCUMULATION; WATER POLLUTION

Itano, K.; Kawai, S.; Miyazaki, N.; Tatsukawa, R.; Fujiyama, T. 1984 Agricultural Biology and Chemistry 48(5):1109-1116

Duck, black
ANAS RUBRIPES

Tissue	Cases Exposure Route	Range	Mean	General Information
4598 Blood, whole	6 Ingestion	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given g) Not given	a) 1.8+/-0.05 ppm b) 1.7+/-0.09 ppm c) 1.7+/-0.04 ppm d) 2.0+/-0.23 ppm e) 1.8+/-0.10 ppm f) 1.9+/-0.05 ppm g) 1.9+/-0.26 ppm Wet wt	a) Controls, fresh b) Formalin, fresh c) Formalin, 2 mo d) Formalin, 8 mo e) Frozen, 2 mo f) Frozen, 8 mo g) Formalin-frozen, 8 mo Methods of preservation and times of analysis. Dose was 50 mg/kg as mercuric chloride in dimethyl sulfoxide. Bird sacrificed 6 hrs after dose. Maryland AAS

BLOOD; DELIBERATE EXPOSURE; ADULTS; METAL POISONING; LEAD POISONING; MEASUREMENT METHODS; MERCURY; CADMIUM; LEAD; DDE; METALS; ACCIDENTAL POISONING; ANIMAL POPULATIONS; BIOACCUMULATION; PESTICIDE RESIDUES; AQUATIC; WATERFOWL

Wiemeyer, S.N.; Moore, J.F.; Mulhern, B.M. 1984 Bulletin of Environmental Contamination and Toxicology 33:525-532

Mercury
7439-97-6
Hg
AtW 200.59,MP -38.87 C, BP 356.72 C, VP 2X10(E-3) mm Hg at 25 C, 100 mm Hg at 260 C

Duck, mallard
ANAS PLATYRHYNCHOS

Tissue	Cases Exposure Route	Range	Mean	General Information
4599 Feathers	4	0.9-1.9 ppm	Not given	a) Captured 1973-1977 b) 1970-1976 Hg discharged by Chisso Corporation's Minamata Factory until 1968. Collected from abdominal side of wings of stuffed specimens. Levels influenced by feeding habits: herbivorous aquatic mean+/-SD=0.9+/-0.4 ppm. Japan, Shiranui Sea

FEATHERS; BIRDS; TERRESTRIAL; ENVIRONMENTAL EXPOSURE; JAPAN; AQUATIC; MERCURY; INDUSTRIAL POLLUTION; WATER POLLUTION; BIOMAGNIFICATION; BIOACCUMULATION; BIOINDICATORS
Doi, R.; Ohno, H.; Harada, M. 1984 Science of the Total Environment 40:155-167

Duck, mandarin
AIX GALERICULATA

Tissue	Cases Exposure Route	Range	Mean	General Information
4600 Feathers	a) 1 b) 4	a) Not given b) 0.9-1.4 ppm	a) 0.6 ppm b) Not given	a) Collected 1968 b) 1970-1976 Hg discharged by Chisso Corporation's Minamata Factory until 1968. Collected from abdominal side of wings of stuffed specimens. Levels influenced by feeding habits: herbivorous aquatic mean+/-SD=0.9+/-0.4 ppm. Japan, Shiranui Sea

FEATHERS; BIRDS; TERRESTRIAL; ENVIRONMENTAL EXPOSURE; JAPAN; AQUATIC; MERCURY; INDUSTRIAL POLLUTION; WATER POLLUTION; BIOMAGNIFICATION; BIOACCUMULATION; BIOINDICATORS
Doi, R.; Ohno, H.; Harada, M. 1984 Science of the Total Environment 40:155-167

Duck, tufted
AYTHYA FULIGULA

Tissue	Cases Exposure Route	Range	Mean	General Information
4601 Muscle	3	Not given	0.09+/-0.02 ppm Wet wt	Pectoral muscle. Animals collected (shot) in 1976-77, avg wt 750 g. Sweden, vicinity of Sjaunja Bird Preservation area NA

ADULTS; JUVENILES; TERRESTRIAL; BIRDS; SWEDEN; ENVIRONMENTAL EXPOSURE; FEATHERS; MUSCLES; MERCURY; BIOLOGICAL MONITORING; BIOACCUMULATION
Lindberg, P. 1984 Bulletin of Environmental Contamination and Toxicology 32:453-459

Mercury
7439-97-6
Hg
AtW 200.59,MP -38.87 C, BP 356.72 C, VP 2X10(E-3) mm Hg at 25 C, 100 mm Hg at 260 C

Duck, wood
AIX SPONSA

Tissue	Cases Exposure Route	Range	Mean	General Information
4602 Adipose	a) 50 b) 5	a) 0.01-0.40 ppm b) 0.01-0.11 ppm	a) 0.10 +or- 0.09 ppm b) 0.06 +or- 0.05 ppm	a) Juveniles b) Adults Collected 1972-73 in river contaminated by Hg discharges from former chlor-alkali plant. Tennessee, Holston River AAS
4603 Liver	a) 50 b) 5	a) 0.13-1.10 ppm b) 0.12-0.34 ppm	a) 0.42 +or- 0.23 ppm b) 0.20 +or- 0.09 ppm	a) Juveniles b) Adults Collected 1972-73 in river contaminated by Hg discharges from former chlor-alkali plant. Tennessee, Holston River AAS
4604 Muscle	a) 50 b) 5	a) 0.05-0.40 ppm b) 0.06-0.11 ppm	a) 0.15 +or- 0.08 ppm b) 0.08 +or- 0.02 ppm	a) Juveniles b) Adults Breast muscle Collected 1972-73 in river contaminated by Hg discharges from former chlor-alkali plant Tennessee, Holston River AAS

BIRDS; JUVENILES; ADIPOSE TISSUE; LIVER; MUSCLES; TENNESSEE; ADULTS; BIOACCUMULATION; INDUSTRIAL POLLUTION; WATER POLLUTION; MERCURY

Lindsay, R.C.; Dimmick, R.W. 1983 Journal of Wildlife Diseases 19(2):114-117

Mercury
7439-97-6
Hg
AtW 200.59,MP -38.87 C, BP 356.72 C, VP 2X10(E-3) mm Hg at 25 C, 100 mm Hg at 260 C

Eagle, bald
HALIAEETUS LEUCOCEPHALUS

Tissue	Cases Exposure Route	Range	Mean	General Information
4605 Eggs	116	a) 0.04-0.11 ppm b) 0.03-0.06 ppm c) 0.16-0.23 ppm d) 0.06-0.12 ppm e) 0.05-0.18 ppm f) 0.02-0.62 ppm g) 0.16-0.17 ppm h) 0.04-0.05 ppm i) 0.10-0.22 ppm j) 0.22-1.20 ppm k) 0.08-0.19 ppm l) 0.02-0.06 ppm m) 0.03-0.17 ppm n) Not applicable o) 0.18-0.42 ppm Fresh wet wt	a) 0.08 ppm b) 0.05 ppm c) 0.21 ppm d) 0.09 ppm e) 0.09 ppm f) 0.17 ppm g) 0.17 ppm h) 0.05 ppm i) 0.16 ppm j) 0.52 ppm k) 0.14 ppm l) 0.04 ppm m) 0.08 ppm n) 0.15 ppm o) 0.31 ppm Fresh wet wt	a) AK, 1975-76, 6 eggs b) OR, 1979, 2 eggs c) CA, 1977, 2 eggs d) AZ, 1977, 3 eggs e) MN, 1976-79, 15 eggs f) WI, 1976-79, 37 eggs g) MI, 1978, 2 eggs h) OH, 1976, 2 eggs i) NY, 1971, 1977-78, 3 eggs j) ME, 1974-79, 19 eggs k) DE, 1977-78, 3 eggs l) MD, 1973, 1977-79, 5 eggs m) VA, 1976-77, 1979, 10 eggs n) LA, 1979, 1 egg o) FL, 1975-77, 1979, 6 eggs In all eggs analyzed for Hg. Levels highest in ME. Cold vapor atomic absorption

EGGS; EAGLES; BIRDS; ENVIRONMENTAL EXPOSURE; ALASKA; ARIZONA; CALIFORNIA; DELAWARE; FLORIDA; LOUISIANA; MAINE; MARYLAND; MICHIGAN; MINNESOTA; NEW YORK; OHIO; OREGON; VIRGINIA; WISCONSIN; UNITED STATES; CHLORINATED HYDROCARBONS; CHLORINE ORGANIC COMPOUNDS; DDD; DDE; DDT; DIELDRIN; HEXACHLOROBENZENE; INSECTICIDES; MERCURY; PESTICIDES; POLYCHLORINATED BIPHENYLS; BIOACCUMULATION; PESTICIDE RESIDUES; POPULATION EXPOSURE

Wiemeyer, S.N.; Lamont, T.G.; Bunck, C.M.; Sindelar, C.R.; Gramlich, F.J.; Fraser, J.D.; Byrd, M.A. 1984 Archives of Environmental Contamination and Toxicology 13:529-549

Eagle, booted
HIERAETUS PENNATUS

Tissue	Cases Exposure Route	Range	Mean	General Information
4606 Eggs	a) 1 b) 3 Ingestion	a) Not given b) Not given	a) 0.153 ppm b) 0.175 ppm Wet wt	a) Collected 1981 b) 1983. Spain Cold vapor spectrometry

EGGS; ENVIRONMENTAL EXPOSURE; SPAIN; ADULTS; METAL POISONING; DDE; DDD; DDT; DIELDRIN; HEXACHLOROCYCLOHEXANE; HEPTACHLOR EPOXIDE; ALDRIN; POLYCHLORINATED BIPHENYLS; MERCURY; LEAD; CADMIUM; COPPER; ZINC; BIOACCUMULATION; BIOCONCENTRATION; HEALTH HAZARDS; PESTICIDE RESIDUES; BIRDS; TERRESTRIAL

Gonzales, M.J.; Hernandez, L.M.; Rico, M.C.; Baluja, G. 1984 Journal of Environmental Health and Science

Mercury
7439-97-6
Hg
AtW 200.59,MP -38.87 C, BP 356.72 C, VP 2X10(E-3) mm Hg at 25 C, 100 mm Hg at 260 C

Eagle, imperial
AQUILA HELIACA

Tissue	Cases Exposure Route	Range	Mean	General Information
4607 Eggs	a) 6 b) 3 c) 3 d) 10 Ingestion	a) Not given b) Not given c) Not given d) Not given	a) 0.200 ppm b) 0.287 ppm c) 0.211 ppm d) 0.516 ppm Wet wt	a) Collected 1980 b) 1981 c) 1982 d) 1983. Spain Cold vapor spectrometry

EGGS; ENVIRONMENTAL EXPOSURE; SPAIN; ADULTS; METAL POISONING; DDE; DDD; DDT; DIELDRIN; HEXACHLOROCYCLOHEXANE; HEPTACHLOR EPOXIDE; ALDRIN; POLYCHLORINATED BIPHENYLS; MERCURY; LEAD; CADMIUM; COPPER; ZINC; BIOACCUMULATION; BIOCONCENTRATION; HEALTH HAZARDS; PESTICIDE RESIDUES; BIRDS; TERRESTRIAL

Gonzales, M.J.; Hernandes, L.M.; Rico, M.C.; Baluja, G. 1984 Journal of Environmental Health and Science

Eagle, Steller's sea
HALIAEETUS PELAGICUS

Tissue	Cases Exposure Route	Range	Mean	General Information
4608 Feathers	1	Not given	5.3 ppm	Captured 1979. Collected on abdominal side of wings. Little industrial pollution, possible control values. Japan, Hokkaido, Kushiro City

FEATHERS; BIRDS; TERRESTRIAL; ENVIRONMENTAL EXPOSURE; JAPAN; AQUATIC; MERCURY; INDUSTRIAL POLLUTION; WATER POLLUTION; BIOMAGNIFICATION; BIOACCUMULATION; BIOINDICATORS

Doi, R.; Ohno, H.; Harada, M. 1984 Science of the Total Environment 40:155-167

Earthworm
PHERETIMA HILGENDORFI

Tissue	Cases Exposure Route	Range	Mean	General Information
4609 Body, whole	37	0.02-0.22 ug/wet g	0.07+/-0.05 ug/wet g	Accumulation is dependent upon age or exposure time. Small earthworms showed faster uptake and excretion rates than large ones. Correlations between metal concentrations and body length or weight were significantly negative. Total burden increased with increased body length up to 15 cm, thereafter it remained constant. Relatively high concentrations found in post-clitellar region. Japan, Matsuyama City, Tsubaki shrine AAS

IRON; MANGANESE; ZINC; COPPER; LEAD; NICKEL; COBALT; ARSENIC; MERCURY; CADMIUM; BIOACCUMULATION; SOILS; BIOINDICATORS; LAND POLLUTION; EARTHWORMS; BODY; TERRESTRIAL; ENVIRONMENTAL EXPOSURE; JAPAN; METALS; BIOLOGICAL MONITORING

Honda, K.; Nasu, T.; Tatsukawa, R. 1984 Archives of Environmental Contamination and Toxicology 13:427-432

Mercury
7439-97-6
Hg
AtW 200.59,MP -38.87 C, BP 356.72 C, VP 2X10(E-3) mm Hg at 25 C, 100 mm Hg at 260 C

Eider
SOMATERIA MOLLISSIMA

Tissue	Cases Exposure Route	Range	Mean	General Information
4610 Liver	9 Ingestion	Not given	1.03+/-0.46 ug/g Wet wt	Shot waterfowl. Above normal nutritional condition. Few juveniles. Levels intermediate in waterfowl studied. Average body wt 2100 g. Norway, Svalbard, Spitsbergen AAS

LIVER; ADIPOSE TISSUE; MERCURY; PESTICIDE RESIDUES; DIETS; BIOACCUMULATION; NORWAY; BIOLOGICAL MONITORING; BIOMAGNIFICATION; BIPHENYL COMPOUNDS; AQUATIC; BIRDS; ENVIRONMENTAL EXPOSURE; WATERFOWL; WATER POLLUTION; FOOD CONTAMINATION; AUTOPSIES; DDE; HEXACHLOROBENZENE; CHLORINATED HYDROCARBONS
Norheim, G.; Kjos-Hanssen, B. 1984 Environmental Pollution (Series A) 33:143-152

Fulmar
FULMARUS GLACIALIS

Tissue	Cases Exposure Route	Range	Mean	General Information
4611 Liver	10 Ingestion	Not given	2.1+/-1.2 ug/g Wet wt	Shot waterfowl. Normal nutritional condition. Few juveniles. Average body wt 860 g. Highest levels in waterfowl studied. Norway, Svalbard; Spitsbergen AAS

LIVER; ADIPOSE TISSUE; MERCURY; PESTICIDE RESIDUES; DIETS; BIOACCUMULATION; NORWAY; BIOLOGICAL MONITORING; BIOMAGNIFICATION; BIPHENYL COMPOUNDS; AQUATIC; BIRDS; ENVIRONMENTAL EXPOSURE; WATERFOWL; WATER POLLUTION; FOOD CONTAMINATION; AUTOPSIES; DDE; HEXACHLOROBENZENE; CHLORINATED HYDROCARBONS
Norheim, G.; Kjos-Hanssen, B. 1984 Environmental Pollution (Series A) 33:143-152

Grebe, black-necked
PODICEPS NIGRICOLLIS

Tissue	Cases Exposure Route	Range	Mean	General Information
4612 Feathers	2	7.0-14.8 ppm	Not given	Captured 1972-1974. Hg discharged by Chisso Corporation's Minamata Factory until 1968. Collected from abdominal side of wings of stuffed specimens. Levels influenced by feeding habits: predatory mean+/-SD=3.6+/-2.9 ppm. Japan, Shiranui Sea

FEATHERS; BIRDS; TERRESTRIAL; ENVIRONMENTAL EXPOSURE; JAPAN; AQUATIC; MERCURY; INDUSTRIAL POLLUTION; WATER POLLUTION; BIOMAGNIFICATION; BIOACCUMULATION; BIOINDICATORS
Doi, R.; Ohno, H.; Harada, M. 1984 Science of the Total Environment 40:155-167

Mercury
7439-97-6
Hg
AtW 200.59,MP -38.87 C, BP 356.72 C, VP 2X10(E-3) mm Hg at 25 C, 100 mm Hg at 260 C

Guillemot, Brunnich's
URIA LOMVIA

Tissue	Cases Exposure Route	Range	Mean	General Information
4613 Liver	9 Ingestion	Not given	0.63+/-0.22 ug/g Wet wt	Shot waterfowl. Lean nutritional condition. Few juveniles. Lowest levels in waterfowl studied. Average body wt 860 g. Norway, Svalbard, Spitsbergen Disease found in one specimen. AAS

LIVER; ADIPOSE TISSUE; MERCURY; PESTICIDE RESIDUES; DIETS; BIOACCUMULATION; NORWAY; BIOLOGICAL MONITORING; BIOMAGNIFICATION; BIPHENYL COMPOUNDS; AQUATIC; BIRDS; ENVIRONMENTAL EXPOSURE; WATERFOWL; WATER POLLUTION; FOOD CONTAMINATION; AUTOPSIES; DDE; HEXACHLOROBENZENE; CHLORINATED HYDROCARBONS

Norheim, G.; Kjos-Hanssen, B. 1984 Environmental Pollution (Series A) 33:143-152

Gull, Asiatic common
LARUS CANUS

Tissue	Cases Exposure Route	Range	Mean	General Information
4614 Feathers	a) 3 b) 5	a) 2.9-6.3 ppm b) 4.3-11.3 ppm	a) Not given b) Not given	a) Captured 1960-1968 b) 1970-1979 Hg discharged by Chisso Corporation's Minamata Factory until 1968. Collected from abdominal side of wings of stuffed specimens. Levels influenced by feeding habits: Fish-eating mean+/-SD=7.1+/-3.7 ppm. Japan, Shiranui Sea

FEATHERS; BIRDS; TERRESTRIAL; ENVIRONMENTAL EXPOSURE; JAPAN; AQUATIC; MERCURY; INDUSTRIAL POLLUTION; WATER POLLUTION; BIOMAGNIFICATION; BIOACCUMULATION; BIOINDICATORS

Doi, R.; Ohno, H.; Harada, M. 1984 Science of the Total Environment 40:155-167

Gull, California
LARUS CALIFORNICUS

Tissue	Cases Exposure Route	Range	Mean	General Information
4615 Eggs		0.13-0.19 mg/kg Wet wt	0.16 mg/kg Wet wt	Collected Summer 1981 Nevada, Lahontan Reservoir AAS
4616 Liver		Not applicable	0.97 mg/kg Wet wt	Collected Summer 1981 Nevada, Lahontan Reservoir AAS
4617 Muscle		Not applicable	0.36 mg/kg Wet wt	Collected Summer 1981 Nevada, Lahontan Reservoir AAS

NEVADA; ADULTS; JUVENILES; BODY; HEART; MUSCLES; LIVER; ABDOMEN; EGGS; BIOACCUMULATION; FISHES; WATER POLLUTION; MERCURY; CRUSTACEANS

Cooper, J.J. 1983 Bulletin of Environmental Contamination and Toxicology 31:9-17

Mercury

7439-97-6
Hg
AtW 200.59,MP -38.87 C, BP 356.72 C, VP 2X10(E-3) mm Hg at 25 C, 100 mm Hg at 260 C

Gull, glaucous
LARUS HYPERBOREUS

Tissue	Cases Exposure Route	Range	Mean	General Information
4618 Liver	11 Ingestion	Not given	1.6+/-0.44 ug/g Wet wt	Shot waterfowl. Above average nutritional condition. Levels intermediate in waterfowl studied. Average body wt 2000 g. Norway, Svalbard, Spitsbergen AAS

LIVER; ADIPOSE TISSUE; MERCURY; PESTICIDE RESIDUES; DIETS; BIOACCUMULATION; NORWAY; BIOLOGICAL MONITORING; BIOMAGNIFICATION; BIPHENYL COMPOUNDS; AQUATIC; BIRDS; ENVIRONMENTAL EXPOSURE; WATERFOWL; WATER POLLUTION; FOOD CONTAMINATION; AUTOPSIES; DDE; HEXACHLOROBENZENE; CHLORINATED HYDROCARBONS

Norheim, G.; Kjos-Hanssen, B. 1984 Environmental Pollution (Series A) 33:143-152

Gull, slaty-backed
LARUS SCHISTISAGUS

Tissue	Cases Exposure Route	Range	Mean	General Information
4619 Feathers	5	4.0-5.2 ppm	Not given	Captured 1979. Hg discharged by Chisso Corporation's Minamata Factory until 1968. Collected on abdominal side of wings. Japan, Shiranui Sea, Minamata Bay

FEATHERS; BIRDS; TERRESTRIAL; ENVIRONMENTAL EXPOSURE; JAPAN; AQUATIC; MERCURY; INDUSTRIAL POLLUTION; WATER POLLUTION; BIOMAGNIFICATION; BIOACCUMULATION; BIOINDICATORS

Doi, R.; Ohno, H.; Harada, M. 1984 Science of the Total Environment 40:155-167

Gyrfalcon
FALCO RUSTICOLUS

Tissue	Cases Exposure Route	Range	Mean	General Information
4620 Feathers	a) 6-8 b) 5 Ingestion	a) 0.24+/-0.10-6.65+/-5.89 ppm b) 0.035-1.29 ppm Dry wt	a) 1.72+/-3.35 ppm b) 0.64 ppm Dry wt	a) Adults, 16 moulted feathers collected 1972-77, reflect intake June-July previous yr b) Nestlings, 7 feathers cut in 1975-77, reflect intake May-June same yr Higher levels in nestlings fed partly with aquatic bird species. Sweden, national park of Stora Sjöfallet and Sjaunja Bird Preservation area NA

ADULTS; JUVENILES; TERRESTRIAL; BIRDS; SWEDEN; ENVIRONMENTAL EXPOSURE; FEATHERS; MUSCLES; MERCURY; BIOLOGICAL MONITORING; BIOACCUMULATION

Lindberg, P. 1984 Bulletin of Environmental Contamination and Toxicology 32:453-459

Mercury
7439-97-6
Hg
AtW 200.59,MP -38.87 C, BP 356.72 C, VP 2X10(E-3) mm Hg at 25 C, 100 mm Hg at 200 C

Hake
MERLUCIUS MERLUCIUS

Tissue	Cases Exposure Route	Range	Mean	General Information
4621 Muscle	a) 2 b) 2 c) 2	a) Not given b) Not given c) Not given	a) 143 ug/kg b) 192 ug/kg c) 106 ug/kg Wet wt	a) Thermaikos Gulf b) Kavala Gulf c) Strymonikos Gulf Collected 1980-82. Length 19-25 cm, wt 86-197 g Greece, North Aegean Sea AAS
GREECE; BODY; MUSCLES; CADMIUM; LEAD; MERCURY; BIOACCUMULATION; FISHES; WATER POLLUTION; MOLLUSKS				
Vasilikiotis, G.; Pytianos, K.; Zotou, A. 1983 Chemosphere 12(1):75-81				

Hake, blue
ANTIMORA ROSTRATA

Tissue	Cases Exposure Route	Range	Mean	General Information
4622 Muscle	a) 21 b) 66	Not given	a) 0.34 ug/g b) 0.51 ug/g Length-adjusted Wet wt	a) Collected in 1880's b) Collected in 1970's Indicates no increase in deep-sea (2000-3000 m) fish in the last century. Suggests high levels in marine fish result from natural processes, not 20th century industrial pollution. Cape Hatteras, Gulf Stream AAS
FISHES; MERCURY; AQUATIC; ENVIRONMENTAL EXPOSURE; ATLANTIC OCEAN; WATER POLLUTION; INDUSTRIAL POLLUTION				
Barber, R.T.; Whaling, P.J.; Cohen, D.M. 1984 Environmental Science and Technology 18:552-555				

Hawk, Asiatic sparrow
ACCIPITER NISUS

Tissue	Cases Exposure Route	Range	Mean	General Information
4623 Feathers	3	1.3-4.2 ppm	Not given	Captured 1955-1973. Hg discharged by Chisso Corporation's Minamata Factory until 1968. Collected from abdominal side of wings of stuffed specimens. Levels influenced by feeding habits: predatory mean+/-SD=3.6+/-2.9 ppm. Japan, Shiranui Sea
FEATHERS; BIRDS; TERRESTRIAL; ENVIRONMENTAL EXPOSURE; JAPAN; AQUATIC; MERCURY; INDUSTRIAL POLLUTION; WATER POLLUTION; BIOMAGNIFICATION; BIOACCUMULATION; BIOINDICATORS				
Doi, R.; Ohno, H.; Harada, M. 1984 Science of the Total Environment 40:155-167				

Mercury
7439-97-6
Hg
AtW 200.59,MP -38.87 C, BP 356.72 C, VP 2X10(E-3) mm Hg at 25 C, 100 mm Hg at 260 C

Heron, eastern reef
EGRETTA SACRA

Tissue	Cases Exposure Route	Range	Mean	General Information
4624 Feathers	1	Not given	24.1 ppm	a) Captured 1970 b) 1971-1978 Hg discharged by Chisso Corporation's Minamata Factory until 1968. Collected from abdominal side of wings of stuffed specimens. Levels influenced by feeding habits: Omniverous aquatic mean+/-SD=5.5+/-5.6 ppm.

FEATHERS; BIRDS; TERRESTRIAL; ENVIRONMENTAL EXPOSURE; JAPAN; AQUATIC; MERCURY; INDUSTRIAL POLLUTION; WATER POLLUTION; BIOMAGNIFICATION; BIOACCUMULATION; BIOINDICATORS
Doi, R.; Ohno, H.; Harada, M. 1984 Science of the Total Environment 40:155-167

Heron, night
NYCTICORAX NYCTICORAX

Tissue	Cases Exposure Route	Range	Mean	General Information
4625 Feathers	a) 5 b) 5	a) 2.4-6.8 ppm b) 2.0-11.2 ppm	a) Not given b) Not given	a) Captured 1960-1969 b) 1971-1978 Hg discharged by Chisso Corporation's Minamata Factory until 1968. Collected from abdominal side of wings of stuffed specimens. Levels influenced by feeding habits: Omniverous aquatic mean+/-SD=5.5+/-5.6 ppm. Japan, Shiranui Sea

FEATHERS; BIRDS; TERRESTRIAL; ENVIRONMENTAL EXPOSURE; JAPAN; AQUATIC; MERCURY; INDUSTRIAL POLLUTION; WATER POLLUTION; BIOMAGNIFICATION; BIOACCUMULATION; BIOINDICATORS
Doi, R.; Ohno, H.; Harada, M. 1984 Science of the Total Environment 40:155-167

Hobby
FALCO SUBBUTEO

Tissue	Cases Exposure Route	Range	Mean	General Information
4626 Eggs	a) 3 b) 4 Ingestion	a) Not given b) Not given	a) 0.168 ppm b) 0.319 ppm Wet wt	a) Collected 1982 b) 1983. Spain Cold vapor spectrometry

EGGS; ENVIRONMENTAL EXPOSURE; SPAIN; ADULTS; METAL POISONING; DDE; DDD; DDT; DIELDRIN; HEXACHLOROCYCLOHEXANE; HEPTACHLOR EPOXIDE; ALDRIN; POLYCHLORINATED BIPHENYLS; MERCURY; LEAD; CADMIUM; COPPER; ZINC; BIOACCUMULATION; BIOCONCENTRATION; HEALTH HAZARDS; PESTICIDE RESIDUES; BIRDS; TERRESTRIAL
Gonzalez, M.J.; Hernandez, L.M.; Rico, M.C.; Baluja, G. 1984 Journal of Environmental Health and Science

Mercury

7439-97-6

Hg

AtW 200.59,MP -38.87 C, BP 356.72 C, VP 2X10(E-3) mm Hg at 25 C, 100 mm Hg at 260 C

Job
APRION VIRISCENS

Tissue	Cases Exposure Route	Range	Mean	General Information
4627 Muscle	6	a) 0.466-0.771 ppm b) 0.302-0.72 ppm	a) 0.645 ppm b) 0.601 ppm	a) Total Hg b) Methyl Hg Collected 1980. Gilled, gutted fish, shoulder samples. Positive correlation between Hg content and wt. Wt 5.6-7.5 kg Indian Ocean (W), Seychelles AAS
SEYCHELLES; INDIAN OCEAN; MUSCLES; BIOACCUMULATION; FISHES; WATER POLLUTION; MERCURY; MERCURY ORGANIC COMPOUNDS				
Matthews, A.D. 1983 Environmental Research 30:305-312				

Kingfish
ACANTHOCYBIUM SOLANDRI

Tissue	Cases Exposure Route	Range	Mean	General Information
4628 Muscle	5	a) 0.184-1.180 ppm b) 0.14-1.104 ppm	a) 0.573 ppm b) 0.570 ppm	a) Total Hg b) Methyl Hg Collected 1980. Gutted fish, shoulder samples. Positive correlation between Hg content and wt. Wt 8.5-22.5 kg Indian Ocean (W), Seychelles AAS
SEYCHELLES; INDIAN OCEAN; MUSCLES; BIOACCUMULATION; FISHES; WATER POLLUTION; MERCURY; MERCURY ORGANIC COMPOUNDS				
Matthews, A.D. 1983 Environmental Research 30:305-312				

Kite, black
MILVUS MIGRANS

Tissue	Cases Exposure Route	Range	Mean	General Information
4629 Eggs	a) 2 b) 5 c) 4 Ingestion	a) Not given b) Not given c) Not given	a) 1.090 ppm b) 0.384 ppm c) 0.219 ppm Wet wt	a) Collected 1981 b) 1982 c) 1983. Spain Cold vapor spectrometry
EGGS; ENVIRONMENTAL EXPOSURE; SPAIN; ADULTS; METAL POISONING; DDE; DDD; DDT; DIELDRIN; HEXACHLOROCYCLOHEXANE; HEPTACHLOR EPOXIDE; ALDRIN; POLYCHLORINATED BIPHENYLS; MERCURY; LEAD; CADMIUM; COPPER; ZINC; BIOACCUMULATION; BIOCONCENTRATION; HEALTH HAZARDS; PESTICIDE RESIDUES; BIRDS; TERRESTRIAL				
Gonzalez, M.J.; Hernandez, L.M.; Rico, M.C.; Baluja, G. 1984 Journal of Environmental Health and Science				

Mercury
7439-97-6
Hg
AtW 200.59,MP -38.87 C, BP 356.72 C, VP 2X10(E-3) mm Hg at 25 C, 100 mm Hg at 260 C

Kite, black-eared
MILVUS MIGRANS

Tissue	Cases Exposure Route	Range	Mean	General Information
4630 Feathers	a) 3 b) 6 c) 1	a) 1.0-2.8 PPM b) 2.1-11.2 ppm c) Not given	a) Not given b) Not given c) 1.2 ppm	a) Captured 1960-1969 b) 1970-1979 c) 1980-present Hg discharged by Chisso Corporation's Minamata Factory until 1968. Collected from abdominal side of wings of stuffed specimens. Levels influenced by feeding habits: predatory mean+/-SD=3.6+/-2.9 ppm. Japan, Shiranui Sea

FEATHERS; BIRDS; TERRESTRIAL; ENVIRONMENTAL EXPOSURE; JAPAN; AQUATIC; MERCURY; INDUSTRIAL POLLUTION; WATER POLLUTION; BIOMAGNIFICATION; BIOACCUMULATION; BIOINDICATORS

Doi, R.; Ohno, H.; Harada, M. 1984 Science of the Total Environment 40:155-167

Kite, red
MILVUS MILVUS

Tissue	Cases Exposure Route	Range	Mean	General Information
4631 Eggs	a) 4 b) 4 c) 2 Ingestion	a) Not given b) Not given c) Not given	a) 0.091 ppm b) 0.289 ppm c) 0.170 ppm Wet wt	a) Collected 1981 b) 1982 c) 1983. Spain Cold vapor spectrometry

EGGS; ENVIRONMENTAL EXPOSURE; SPAIN; ADULTS; METAL POISONING; DDE; DDD; DDT; DIELDRIN; HEXACHLOROCYCLOHEXANE; HEPTACHLOR EPOXIDE; ALDRIN; POLYCHLORINATED BIPHENYLS; MERCURY; LEAD; CADMIUM; COPPER; ZINC; BIOACCUMULATION; BIOCONCENTRATION; HEALTH HAZARDS; PESTICIDE RESIDUES; BIRDS; TERRESTRIAL

Gonzales, M.J.; Hernandez, L.M.; Rico, M.C.; Baluja, G. 1984 Journal of Environmental Health and Science

Mercury
7439-97-6
Hg
AtW 200.59, MP -38.87 C, BP 356.72 C, VP 2X10(E-3) mm Hg at 25 C, 100 mm Hg at 260 C

Loon, common
GAVIA IMMER

Tissue	Cases Exposure Route	Range	Mean	General Information
4632 Adipose	a) 21 b) 49 c) 58 d) 6 e) 13 f) 10 g) 11	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given g) Not given	a) 0.15 ug/g b) 0.22 ug/g c) 0.22 ug/g d) 0.21 ug/g e) 0.47 ug/g f) 0.65 ug/g g) 0.17+/-0.14 ug/g Wet wt	a) Healthy juveniles, 74% fat b) Healthy adult males, 66% fat c) Healthy adult females, 73% fat d) Emaciated juveniles, 67% fat e) Emaciated adult males, 54% fat f) Emaciated adult females, 56% fat g) Healthy, collected in 1978-79, 62.0+/-13.1% fat Emaciated birds contained higher levels. a)-f) collected in 1971-1974. Canada, Ontario, Kinoje Lake; Algonquin Park; Parry Sound GC
4633 Blood	a) 8 b) 13 c) 10	a) Not given b) Not given c) Not given	a) 0.93+/-0.57 mg/kg b) 1.74+/-0.91 mg/kg c) 2.52+/-1.21 mg/kg Wet wt	a) 0.3+/-0.2% fat in healthy juveniles b) 0.8+/-1.7% fat in healthy adults c) 0.4+/-0.6% fat in emaciated adults Adults accumulated more than juveniles. Emaciated with higher levels than healthy. Collected in 1971-74. Canada, Ontario, Kinoje Lake; Algonquin Park; Parry Sound GC

EGGS; BRAIN; ADIPOSE TISSUE; LIVER; MUSCLES; FEATHERS; INTESTINES; EMBRYOS; DDT; DDE; DIELDRIN; HEPTACHLOR EPOXIDE; POLYCHLORINATED BIPHENYLS; HEXACHLOROBENZENE; MERCURY; CHLORINE ORGANIC COMPOUNDS; PESTICIDES; PESTICIDE RESIDUES; BIOINDICATORS; BIOLOGICAL MONITORING; BIOACCUMULATION; LUNGS; GIZZARD; BLOOD; HEART; KIDNEYS

Frank, R.; Lumsden, H.; Barr, J.F.; Braun, H.E. 1983 Archives of Environmental Contamination and Toxicology 12:641-654

Tissue	Cases Exposure Route	Range	Mean	General Information
4634 Body		20-30 ppm Wet wt	Not given	Dying birds washed up on beach. Samples had large amounts of microphallid trematodes in their intestines, kidneys, livers, and brain. Florida, northern Gulf Coast, Dog Island Weakness, emaciation, death Organ lesions, anemia, muscle atrophy

BODY; ENVIRONMENTAL EXPOSURE; AQUATIC; BIRDS; FLORIDA; ADULTS; METAL POISONING; MERCURY; ANIMAL POPULATIONS; BIOACCUMULATION; BIOLOGICAL MONITORING

Graham, F. 1984 Audubon 86(2):30-33

Mercury
7439-97-6
Hg
AtW 200.59,MP -38.87 C, BP 356.72 C, VP 2X10(E-3) mm Hg at 25 C, 100 mm Hg at 260 C

Loon, common
GAVIA IMMER

Tissue	Cases Exposure Route	Range	Mean	General Information
4635 Brain	a) 21 b) 49 c) 58 d) 6 e) 13 f) 10 g) 11 h) 38 i) 1	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given g) Not given h) Not given i) Not given	a) 0.44 ug/g b) 0.57 ug/g c) 0.51 ug/g d) 1.82 ug/g e) 1.04 ug/g f) 1.03 ug/g g) 0.73+/-0.30 ug/g h) 0.58+/-0.30 ug/g i) 1.10 ug/g Wet wt	a) Healthy juveniles, 6.8% fat b) Healthy adult males, 6.9% fat c) Healthy adult females, 6.9% fat d) Emaciated juveniles, 7.2% fat e) Emaciated adult males, 7.1% fat f) Emaciated adult females, 6.2% fat g) Unknown condition, 7.76+/-1.12% fat h) Healthy, 6.16+/-0.59% fat i) Emaciated, 7.13% fat Emaciated birds contained higher levels. a)-f) collected in 1971-74, g) in 1969 h) -i) in 1978-79. Canada, Ontario, Kinoje Lake; Algonquin Park; Parry Sound GC
4636 Embryos	a) 34 b) 15 c) 12	a) Not given b) Not given c) Not given	a) 0.92+/-0.25 ug/g b) 1.11+/-0.29 ug/g c) 0.81+/-0.17 ug/g Wet wt	a) Collected in 1970 from Algonquin b) In 1972 from Algonquin-Parry Sound c) In 1976 same as b). Canada, Ontario, Kinoje Lake; Algonquin Park; Parry Sound GC
4637 Feathers	103	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given g) Not given h) Not given	a) 5.00 mg/kg b) 4.74 mg/kg c) 3.75 mg/kg d) 10.7 mg/kg e) 12.9 mg/kg f) 19.4 mg/kg g) 13.4 mg/kg h) 14.9 mg/kg Wet wt	a) From back of healthy juveniles, 4.3% fat b) From belly of healthy juveniles, 2.9% fat c) From back of healthy adults, 2.2% fat d) From belly of healthy adults, 1.5% fat e) From back of emaciated juveniles, 3.3% fat f) From belly of emaciated juveniles, 0.8% fat g) From back of emaciated adults, 0.5% fat h) From belly of emaciated adults, 0.3 % fat Emaciated bird.. contained higher levels. Collected in 1971-74. Canada, Ontario, Kinoje Lake; Algonquin Park; Parry Sound GC
4638 Gizzard	a) 8 b) 13 c) 10	a) Not given b) Not given c) Not given	a) 0.87+/-0.41 mg/kg b) 1.00+/-0.50 mg/kg c) 1.62+/-1.20 mg/kg Wet wt	a) 2.9+/-2.6% fat in healthy juveniles b) 2.8+/-3.0% fat in healthy adults c) 1.1+/-1.6% fat in emaciated adults Adults accumulated more than juveniles. Emaciated with higher levels than healthy. Collected in 1971-74. Canada, Ontario, Kinoje Lake; Algonquin Park; Parry Sound GC
4639 Heart	a) 8 b) 13 c) 10	a) Not given b) Not given c) Not given	a) 0.62+/-0.19 mg/kg b) 1.10+/-0.56 mg/kg c) 1.76+/-0.57 mg/kg Wet wt	a) 5.3+/-2.4% fat in healthy juveniles b) 4.4+/-2.7% fat in healthy adults c) 1.1+/-1.3% fat in emaciated adults Adults accumulated more than juveniles. Emaciated with higher levels than healthy. Collected in 1971-74. Canada, Ontario, Kinoje Lake; Algonquin Park; Parry Sound GC

(next page)

Mercury
7439-97-6
Hg
AtW 200.59,MP -38.87 C, BP 356.72 C, VP 2X10(E-3) mm Hg at 25 C, 100 mm Hg at 260 C

Loon, common
GAVIA IMMER

(continued)

Tissue	Cases Exposure Route	Range	Mean	General Information
4640 Intestine	a) 8 b) 13 c) 10	a) Not given b) Not given c) Not given	a) 0.73+/-0.35 mg/kg b) 0.77+/-0.43 mg/kg c) 2.43+/-1.98 mg/kg Wet wt	a) 6.4+/-8.2% fat in healthy juveniles b) 4.9+/-3.9% fat in healthy adults c) 2.9+/-3.8% fat in emaciated adults Adults accumulated more than juveniles. Emaciated with higher levels than healthy. Collected in 1971-74. Canada, Ontario, Kinoje Lake; Algonquin Park; Parry Sound GC
4641 Kidney	a) 8 b) 13 c) 10	a) Not given b) Not given c) Not given	a) 1.12+/-0.77 mg/kg b) 6.58+/-6.29 mg/kg c) 22.0+/-17.6 mg/kg Wet wt	a) 3.1+/-1.6% fat in healthy juveniles b) 1.6+/-1.5% fat in healthy adults c) 1.2+/-0.5% fat in emaciated adults Adults accumulated more than juveniles. Emaciated with higher levels than healthy. Collected in 1971-74. Canada, Ontario, Kinoje Lake; Algonquin Park; Parry Sound GC
4642 Liver	a) 21 b) 49 c) 58 d) 6 e) 13 f) 10	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given	a) 1.92 ug/g b) 6.35 ug/g c) 5.04 ug/g d) 26.4 ug/g e) 16.3 ug/g f) 19.0 ug/g Wet wt	a) Healthy juveniles, 2.6% fat b) Healthy adult males, 3.5% fat c) Healthy adult females, 3.8% fat d) Emaciated juveniles, 2.0% fat e) Emaciated adult males, 3.3% fat f) Emaciated adult females, 1.7% fat Adults with higher levels than juveniles. Emaciated birds contained higher levels. Collected in 1971-74. Canada, Ontario, Kinoje Lake; Algonquin Park; Parry Sound GC
4643 Lung	a) 8 b) 13 c) 10	a) Not given b) Not given c) Not given	a) 0.55+/-0.17 mg/kg b) 1.08+/-0.67 mg/kg c) 1.90+/-0.95 mg/kg Wet wt	a) 2.0+/-1.0% fat in healthy juveniles b) 1.2+/-0.7% fat in healthy adults c) 0.4+/-0.1% fat in emaciated adults Adults accumulated more than juveniles. Emaciated with higher levels than healthy. Collected in 1971-74. Canada, Ontario, Kinoje Lake; Algonquin Park; Parry Sound GC
4644 Muscle	a) 21 b) 49 c) 58 d) 6 e) 13 f) 10 g) 21	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given g) Not given	a) 0.79 ug/g b) 1.14 ug/g c) 1.02 ug/g d) 5.41 ug/g e) 3.26 ug/g f) 2.71 ug/g g) 0.96+/-0.59 ug/g Wet wt	a) Healthy juveniles, 5.4% fat b) Healthy adult males, 4.4% fat c) Healthy adult females, 4.4% fat d) Emaciated juveniles, 0.5% fat e) Emaciated adult males, 1.2% fat f) Emaciated adult females, 0.3% fat g) Healthy, collected in 1978-79, 2.59+/-1.16% fat Emaciated birds contained higher levels. a)-f) collected in 1971-1974. Canada, Ontario, Kinoje Lake; Algonquin Park; Parry Sound GC

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Mercury
7439-97-6
Hg
AtW 200.59,MP -38.87 C, BP 356.72 C, VP 2X10(E-3) mm Hg at 25 C, 100 mm Hg at 260 C

Loon, common
GAVIA IMMER

(continued)

Tissue	Cases Exposure Route	Range	Mean	General Information
4645 Uropygial gland	a) 15 b) 72 c) 3 d) 13	a) Not given b) Not given c) Not given d) Not given	a) 0.30 mg/kg b) 0.30 mg/kg c) 1.49 mg/kg d) 0.59 mg/kg Wet wt	a) Healthy juveniles, 34% fat b) Healthy adults, 36% fat c) Emaciated juveniles, 25% fat d) Emaciated adults, 27% fat Adults accumulated higher levels than juveniles. Emaciated birds contained higher levels. Collected in 1971-74. Canada, Ontario, Kinoje Lake; Algonquin Park; Parry Sound GC

EGGS; BRAIN; ADIPOSE TISSUE; LIVER; MUSCLES; FEATHERS; INTESTINES; EMBRYOS; DDT; DDE; DIELDRIN; HEPTACHLOR EPOXIDE; POLYCHLORINATED BIPHENYLS; HEXACHLOROBENZENE; MERCURY; CHLORINE ORGANIC COMPOUNDS; PESTICIDES; PESTICIDE RESIDUES; BIOINDICATORS; BIOLOGICAL MONITORING; BIOACCUMULATION; LUNGS; GIZZARD; BLOOD; HEART; KIDNEYS

Frank, R.; Lumsden, H.; Barr, J.P.; Braun, H.E. 1983 Archives of Environmental Contamination and Toxicology 12:641-654

Mackerel

Tissue	Cases Exposure Route	Range	Mean	General Information
4646 Muscle	67	a) 0.02-0.33 mg/kg b) 0.05-0.51 mg/kg Wet wt	a) 0.11 +or-0.07 mg/kg b) 0.17 +or- 0.09 mg/kg Wet wt	a) Organic Hg b) Total Hg Canned, 38 samples. Purchased at different retailers. Papua New Guinea, Port Moresby

NEW GUINEA; MUSCLES; MERCURY; FISHES; BIOACCUMULATION; DIETS

Kyle, J.H.; Ghani, N. 1983 Science of the Total Environment 26:157-162

Mackerel, Atka
PLEUROGRAMMUS MONOPTERYGIUS

Tissue	Cases Exposure Route	Range	Mean	General Information
4647 Muscle	20 Ingestion	Not given	0.014+/-0.004 ug/g Wet wt	Off Kodiak Island, AK. Mean wt 461+/-156 g. Mean below FDA action level for food contamination. Pacific Ocean AAS

FISHES; BIOLOGICAL MONITORING; PACIFIC OCEAN; ALUMINUM; BARIUM; CALCIUM; CHROMIUM; COPPER; IRON; MERCURY; POTASSIUM; LITHIUM; MAGNESIUM; MANGANESE; SODIUM; PHOSPHORUS; STRONTIUM; ZINC; AQUATIC; ENVIRONMENTAL EXPOSURE; WATER POLLUTION; FOOD CONTAMINATION; MUSCLES

Teeny, F.M.; Gauglitz, E.J., Jr.; Hall, A.S.; Houle, C.R. 1984 Journal of Agricultural and Food Chemistry 32:852-855

Mercury
7439-97-6
Hg
AtW 200.59,MP -38.87 C, BP 356.72 C, VP 2X10(E-3) mm Hg at 25 C, 100 mm Hg at 260 C

Merganser, red-breasted
MERGUS SERRATOR

Tissue	Cases Exposure Route	Range	Mean	General Information
4648 Eggs	a) 49 b) 49	a) Not applicable b) Not applicable	a) 0.58 ppm b) 0.44 ppm Wet wt Geometric means	a) Randomly selected b) Unhatched Collected 1977, pairs from same nests analysed. No significant difference. Lower limit 0.001 ppm. Lake Michigan, northwestern islands AAS

EGGS; AQUATIC; BIRDS; WATERFOWL; ENVIRONMENTAL EXPOSURE; GREAT LAKES; BROMINATED HYDROCARBONS; CHLORINATED HYDROCARBONS; BROMINE ORGANIC COMPOUNDS; CHLORINE ORGANIC COMPOUNDS; DDE; DDT; DIELDRIN; HEPTACHLOR EPOXIDE; HEXACHLOROBENZENE; INSECTICIDES; MERCURY; NONACHLOR; OXYCHLORDANE; PESTICIDES; POLYBROMINATED BIPHENYLS; POLYCHLORINATED BIPHENYLS; BIOACCUMULATION

Haseltine, S.D.; Heinz, G.H.; Hensler, G.L.; Reichel, W.L. 1983 Environmental Pollution 32:211-232

Mosquitofish
GAMBUSIA AFFINIS

Tissue	Cases Exposure Route	Range	Mean	General Information
4649 Body	1	Not given	0.53 mg/kg Wet wt	Collected Summer 1981 Nevada, Lahontan Reservoir AAS

NEVADA; ADULTS; JUVENILES; BODY; HEART; MUSCLES; LIVER; ABDOMEN; EGGS; BIOACCUMULATION; FISHES; WATER POLLUTION; MERCURY; CRUSTACEANS

Cooper, J.J. 1983 Bulletin of Environmental Contamination and Toxicology 31:9-17

Mercury
7439-97-6
Hg
AtW 200.59,MP -38.87 C, BP 356.72 C, VP 2X10(E-3) mm Hg at 25 C, 100 mm Hg at 260 C

Mullet
MULLUS BARBATUS

Tissue	Cases Exposure Route	Range	Mean	General Information
4650 Muscle	a) 3 b) 3 c) 3	a) Not given b) Not given c) Not given	a) 160 ug/kg b) 320 ug/kg c) 150 ug/kg Wet wt	a) Thermaikos Gulf b) Kevala Gulf c) Strymonikos Gulf Collected 1980-82. Length 11-12 cm, wt 20-31 g Greece, North Aegean Sea AAS

GREECE; BODY; MUSCLES; CADMIUM; LEAD; MERCURY; BIOACCUMULATION; FISHES; WATER POLLUTION; MOLLUSKS
Vasilikiotis, G.; Fytianos, K.; Zotou, A. 1983 Chemosphere 12(1):75-81

Mussel
MYTILUS GALLOPROVINCIALIS

Tissue	Cases Exposure Route	Range	Mean	General Information
4651 Body	a) 8 b) 8 c) 10	a) 184-239 ug/kg b) 96-226 ug/kg c) 50-77 ug/kg Wet wt	a) 212 ug/kg b) 161 ug/kg c) 64 ug/kg Wet wt	a) Thermaikos Gulf b) Kavala Gulf c) Strymonikos Gulf Collected 1980-82. Length 3-6 cm, wt 3-11 g Greece, North Aegean Sea AAS

GREECE; BODY; MUSCLES; CADMIUM; LEAD; MERCURY; BIOACCUMULATION; FISHES; WATER POLLUTION; MOLLUSKS
Vasilikiotis, G.; Fytianos, K.; Zotou, A. 1983 Chemosphere 12(1):75-81

Oyster, American
CRASSOSTREA VIRGINICA

Tissue	Cases Exposure Route	Range	Mean	General Information
4652 Body	a) 104 b) 129 c) 95 d) 281 e) 376 Ingestion	a) 0.002-0.230 ug/g b) 0.002-0.087 ug/g c) 0.002-0.045 ug/g d) 0.002-0.031 ug/g e) 0.001-0.13 ug/g Wet wt	a) 0.016 ug/g b) 0.012 ug/g c) 0.010 ug/g d) 0.009 ug/g e) 0.009 ug/g Wet wt	a) 1976 b) 1977 c) 1978 d) 1979 e) 1980 Biological monitoring for heavy metals in shellfish 1976-1980. Residues were well below safe levels. No significant yearly trends. Maryland, Chesapeake Bay area, tributaries AAS

CLAMS; BLUE CRABS; SHELLFISH; CHESAPEAKE BAY; MARYLAND; BIOLOGICAL MONITORING; BIOCONCENTRATION; COPPER; ZINC; LEAD; CADMIUM; ARSENIC; MERCURY; CHROMIUM; WATER POLLUTION; FOOD CONTAMINATION; AQUATIC; MOLLUSKS; ENVIRONMENTAL EXPOSURE
Eisenberg, M.; Topping, J.J. 1984 Journal of Environmental Science and Health B19(7):649-671

Mercury
7439-97-6
Hg
AtW 200.59,MP -38.87 C, BP 356.72 C, VP 2X10(E-3) mm Hg at 25 C, 100 mm Hg at 260 C

Perch
PERCA FLUVIATILIS

Tissue	Cases Exposure Route	Range	Mean	General Information
4653 Muscle	a) 10 b) 10 c) 8 Ingestion	a) Not given b) Not given c) Not given	a) 720+/-102 ng/g b) 881+/-208 ng/g c) 735+/-73 ng/g Dry wt	a) Controls b) 1:200 diluted effluent c) 1:20 diluted effluent 27 d exposure to heavy-metal-containing artificial effluent, designed to simulate effluent of a sulfide ore smelter. No significant uptake. Sweden AAS

LIVER; MUSCLES; FISHES; AQUATIC; DELIBERATE EXPOSURE; SWEDEN; METAL POISONING; ZINC; LEAD; COPPER; CADMIUM; MERCURY; ARSENIC; BIOACCUMULATION; INDUSTRIAL POLLUTION; WATER POLLUTION; ADULTS

Larsson, A.; Haux, C.; Sjobeck, M.-L.; Lithner, G. 1984 Ecotoxicology and Environmental Safety 8:118-128

Perch, yellow
PERCA FLAVESCENS

Tissue	Cases Exposure Route	Range	Mean	General Information
4654 Body		Not given	0.13 mg/kg Wet wt	Collected Summer 1981. Composite sample, whole young of the year Nevada, Lahontan Reservoir AAS
4655 Heart		Not given	1.80 mg/kg Wet wt	Collected Summer 1981, composite sample Nevada, Lahontan Reservoir AAS
4656 Liver		Not given	2.45 mg/kg Wet wt	Collected Summer 1981, composite sample Nevada, Lahontan Reservoir AAS
4657 Muscle	6	0.30-1.67 mg/kg Wet wt	1.50 mg/kg Wet wt	Collected Summer 1981, wt 10-111 g. Significant positive correlation between wt and Hg content Nevada, Lahontan Reservoir AAS

NEVADA; ADULTS; JUVENILES; BODY; HEART; MUSCLES; LIVER; ABDOMEN; EGGS; BIOACCUMULATION; FISHES; WATER POLLUTION; MERCURY; CRUSTACEANS

Cooper, J.J. 1983 Bulletin of Environmental Contamination and Toxicology 31:9-17

Mercury

7439-97-6
Hg
AtW 200.59,MP -38.87 C, BP 356.72 C, VP 2X10(E-3) mm Hg at 25 C, 100 mm Hg at 260 C

Pheasant, green
PHASIANUS COLCHICUS

Tissue	Cases Exposure Route	Range	Mean	General Information
4658 Feathers	5	0.3-1.2 ppm	Not given	Captured 1965-1978 Hg discharged by Chisso Corporation's Minamata Factory until 1968. Collected from abdominal side of wings of stuffed specimens. Levels influenced by feeding habits: Omnivorous terrestrial mean+/-SD=1.5+/-1.2 ppm. Japan, Shiranui Sea
FEATHERS; BIRDS; TERRESTRIAL; ENVIRONMENTAL EXPOSURE; JAPAN; AQUATIC; MERCURY; INDUSTRIAL POLLUTION; WATER POLLUTION; BIOMAGNIFICATION; BIOACCUMULATION; BIOINDICATORS Doi, R.; Ohno, H.; Harada, M. 1984 Science of the Total Environment 40:155-167				

Pike
ESOX LUCIUS L.

Tissue	Cases Exposure Route	Range	Mean	General Information
4659 Muscle	Ingestion	a) 0.13-1.7 mg/kg b) 0.4-1.85 mg/kg c) 0.25-1.35 mg/kg d) 0.2-0.5 mg/kg e) 0.15-2.0 mg/kg f) 0.05-0.2 mg/kg Wet wt	a) 0.68 mg/kg b) 0.86 mg/kg c) 0.74 mg/kg d) 0.36 mg/kg e) 0.86 mg/kg f) Not given Wet wt	a) Halland/Smaland, southern Sweden b) Varmland/Bergslagen, chlor-alkali industry c) Southern Norrland, mid-Sweden d) Northern Norrland, farthest from emission sources e) Ronnskar, sulfide ore smelter emissions f) Background Dorsal muscle. To eliminate size variables, the data were converted to mean content in "standard pike." Good correlation between water pH and Hg in a), b) and c). Population composition of fish in lakes affects Hg content in pike (food sources for pike). Range a)-e) estimated from graph. Sweden AAS
FISHES; MERCURY; LAKES; SWEDEN; MUSCLES; ACIDIFICATION; SEDIMENTS; AQUATIC; ENVIRONMENTAL EXPOSURE Bjorklund, I.; Borg, I.; Johansson, K. 1984 Ambio 13(2):118-121				

Tissue	Cases Exposure Route	Range	Mean	General Information
4660 Muscle	a) 32 b) 17 c) 17 d) 21 e) 24 Ingestion	a) 0.9-1.7 mg/kg b) 0.45-0.6 mg/kg c) 0.45-0.6 mg/kg d) 0.6-0.8 mg/kg e) 0.45-0.7 mg/kg	a) Not applicable b) Not applicable c) Not applicable d) Not applicable e) Not applicable	a) 1971, 0.5-1.5 kg b) 1974, 0.5-1.0 kg c) 1975, 0.5-1.0 kg d) 1976, 0.5-1.0 kg e) 1978, 0.5-1.0 kg Weight of specimens and year taken from Lake Hacksjon. Lake intensively fished in 1972 and 1973, which led to 50% reduction in tissue levels. Estimated from graph. Sweden NA
MUSCLES; FISHES; AQUATIC; ENVIRONMENTAL EXPOSURE; SWEDEN; METAL POISONING; MERCURY; BIOACCUMULATION; WATER POLLUTION Gothberg, A. 1983 Ambio 12(5):259-261				

Mercury
7439-97-6
Hg
AtW 200.59,MP -38.87 C, BP 356.72 C, VP 2X10(E-3) mm Hg at 25 C, 100 mm Hg at 260 C

Pike, northern
ESOX LUCIUS

Tissue	Cases Exposure Route	Range	Mean	General Information
4661 Body	a) 14 b) 8 c) 10	a) Not given b) Not given c) Not given	a) 0.70+/-0.12 ug/g b) 1.04+/-0.07 ug/g c) 0.92+/-0.25 ug/g	a) Captured 7/26/79, fork length 14.4+/-2.4 cm, weight 19.49+/-9.23 g b) 8/8/79, 19.4+/-1.7 cm, 44.49+/-9.13 g c) 8/23/79, 17.4+/-3.1 cm, 36.78+/-21.73 g Levels reduced with low Se levels, increased with length and weight. a) significantly less than b) and c). Canada, Ontaria, Clay Lake AAS
4662 Liver	a) 14 b) 8 c) 10	a) Not given b) Not given c) Not given	a) 1.05+/-0.29 ug/g b) 1.17+/-0.19 ug/g c) 1.52+/-0.51 ug/g	a) Captured 7/26/79, fork length 14.4+/-2.4 cm, weight 19.49+/-9.23 g b) 8/8/79, 19.4+/-1.7 cm, 44.49+/-9.13 g c) 8/23/79, 17.4+/-3.1 cm, 36.78+/-21.73 g Levels reduced with low Se levels. Canada, Ontaria, Clay Lake AAS

BODY; LIVER; AQUATIC; FISHES; DELIBERATE EXPOSURE; ENVIRONMENTAL EXPOSURE; ONTARIO; CANADA; BIOACCUMULATION; MERCURY; SELENIUM; WATER POLLUTION
Klaverkamp, J.F.; Hodgins, D.A.; Lutz, A. 1983 Archives of Environmental Contamination and Toxicology 12:405-413

Pilchard

Tissue	Cases Exposure Route	Range	Mean	General Information
4663 Muscle	5	a) <0.02-0.05 b) 0.02-0.07 Mg/kg Wet wt	b) < 0.04+or-0.02 b) 0.04+or-0.02 Mg/kg Wet wt	a) Organic Hg b) Total Hg Canned, 38 samples. Purchased at different retailers. Papua New Guinea, Port Moresby

NEW GUINEA; MUSCLES; MERCURY; FISHES; BIOACCUMULATION; DIETS
Kyle, J.H.; Ghani, N. 1983 Science of the Total Environment 26:157-162

Platte vielle
EPINEPHELUS FLAVOCAERULEUS

Tissue	Cases Exposure Route	Range	Mean	General Information
4664 Muscle	6	a) 0.358-0.739 ppm b) 0.311-0.605 ppm	a) 0.527 ppm b) 0.431 ppm	a) Total Hg b) Methyl Hg Collected 1980. Gilled, gutted fish, shoulder samples. Wt 5.4-8.3 kg Indian Ocean (W), Seychelles AAS

SEYCHELLES; INDIAN OCEAN; MUSCLES; BIOACCUMULATION; FISHES; WATER POLLUTION; MERCURY; MERCURY ORGANIC COMPOUNDS
Matthews, A.D. 1983 Environmental Research 30:305-312

Mercury

7439-97-6
Hg
AtW 200.59,MP -38.87 C, BP 356.72 C, VP 2X10(E-3) mm Hg at 25 C, 100 mm Hg at 260 C

Plover
PLUVIALIS APRICARIA

Tissue	Cases Exposure Route	Range	Mean	General Information
4665 Muscle	5	Not given	0.11+/-0.03 ppm Wet wt	Pectoral muscle. Animals collected (shot) in 1976-77, avg wt 170 g. Sweden, vicinity of Sjaunja Bird Preservation area NA
ADULTS; JUVENILES; TERRESTRIAL; BIRDS; SWEDEN; ENVIRONMENTAL EXPOSURE; FEATHERS; MUSCLES; MERCURY; BIOLOGICAL MONITORING; BIOACCUMULATION Lindberg, P. 1984 Bulletin of Environmental Contamination and Toxicology 32:453-459				

Pollock, walleye
THERAGRA CHALCOGRAMMA

Tissue	Cases Exposure Route	Range	Mean	General Information
4666 Muscle	Ingestion	a) Not given b) Not given c) Not given d) Not given	a) 0.030+/-0.042 ug/g b) 0.030+/-0.018 ug/g c) 0.018+/-0.009 ug/g d) 0.027+/-0.027 ug/g Wet wt	a) Caught in Bering Sea, AK, 20 fish, mean wt 965+/-352 g b) Shelik of Strait, AK, 10 fish, 1300+/-488 g c) Cape Ommaney, AK, 12 fish, 323+/-223 g. Low levels, means below FDA action level for food contamination. Pacific Ocean AAS
FISHES; BIOLOGICAL MONITORING; PACIFIC OCEAN; ALUMINUM; BARIUM; CALCIUM; CHROMIUM; COPPER; IRON; MERCURY; POTASSIUM; LITHIUM; MAGNESIUM; MANGANESE; SODIUM; PHOSPHORUS; STRONTIUM; ZINC; AQUATIC; ENVIRONMENTAL EXPOSURE; WATER POLLUTION; FOOD CONTAMINATION; MUSCLES Teeny, F.M.; Gauglitz, E.J., Jr.; Hall, A.S.; Houle, C.R. 1984 Journal of Agricultural and Food Chemistry 32:852-855				

Pomfret
BRAMA JAPONICA

Tissue	Cases Exposure Route	Range	Mean	General Information
4667 Muscle	24 Ingestion	Not given	0.114+/-0.052 ug/g Wet wt	Gulf of Alaska. Mean wt 1088+/-162 g. Mean below FDA action level for food contamination. Pacific Ocean AAS
FISHES; BIOLOGICAL MONITORING; PACIFIC OCEAN; ALUMINUM; BARIUM; CALCIUM; CHROMIUM; COPPER; IRON; MERCURY; POTASSIUM; LITHIUM; MAGNESIUM; MANGANESE; SODIUM; PHOSPHORUS; STRONTIUM; ZINC; AQUATIC; ENVIRONMENTAL EXPOSURE; WATER POLLUTION; FOOD CONTAMINATION; MUSCLES Teeny, F.M.; Gauglitz, E.J., Jr.; Hall, A.S.; Houle, C.R. 1984 Journal of Agricultural and Food Chemistry 32:852-855				

Mercury
7439-97-6
Hg
AtW 200.59,MP -38.87 C, BP 356.73 C, VP 2X10(E-3) mm Hg at 25 C, 100 mm Hg at 260 C

Ptarmigan, willow
LAGOPUS LAGOPUS

Tissue	Cases Exposure Route	Range	Mean	General Information
4668 Muscle	21	Not given	0 ppm	Pectoral muscle. Animals collected (shot) in 1976-77, avg wt 500 g. Sweden, vicinity of Sjaunja Bird Preservation area NA
ADULTS; JUVENILES; TERRESTRIAL; BIRDS; SWEDEN; ENVIRONMENTAL EXPOSURE; FEATHERS; MUSCLES; MERCURY; BIOLOGICAL MONITORING; BIOACCUMULATION Lindberg, P. 1984 Bulletin of Environmental Contamination and Toxicology 32:453-459				

Rail, eastern water
RALLUS AQUATICUS

Tissue	Cases Exposure Route	Range	Mean	General Information
4669 Feathers	2	4.2-5.0 ppm	Not given	a) Captured 1968-1975 b) 1971-1976 Hg discharged by Chisso Corporation's Minamata Factory until 1968. Collected from abdominal side of wings of stuffed specimens. Levels influenced by feeding habits: Omnivorous aquatic mean+/-SD=5.5+/-5.6 ppm. Japan, Shiranui Sea
FEATHERS; BIRDS; TERRESTRIAL; ENVIRONMENTAL EXPOSURE; JAPAN; AQUATIC; MERCURY; INDUSTRIAL POLLUTION; WATER POLLUTION; BIOMAGNIFICATION; BIOACCUMULATION; BIOINDICATORS Doi, R.; Ohno, H.; Harada, M. 1984 Science of the Total Environment 40:155-167				

Roach
RUTILUS RUTILUS

Tissue	Cases Exposure Route	Range	Mean	General Information
4670 Muscle	a) 20 b) 20 c) 16 d) 25 Ingestion	a) 0.3-0.7 mg/kg b) 0.15-0.3 mg/kg c) 0.15-0.3 mg/kg d) 0.15-0.3 mg/kg	a) Not applicable b) Not applicable c) Not applicable d) Not applicable	a) 1971, 50-150 g b) 1975, 50-150 g c) 1976, 50-150 g 1978, 50-150 g Weight of specimens and year taken from Lake Hacksjon. Lake intensively fished in 1972 and 1973 which led to 50% reduction in tissue level. Estimated from graph. Sweden NA
MUSCLES; FISHES; AQUATIC; ENVIRONMENTAL EXPOSURE; SWEDEN; METAL POISONING; MERCURY; BIOACCUMULATION; WATER POLLUTION Gothberg, A. 1983 Ambio 12(5):259-261				

Mercury
7439-97-6
Hg
AtW 200.59,MP -38.87 C, BP 356.72 C, VP 2X10(E-3) mm Hg at 25 C, 100 mm Hg at 260 C

Ruff
PHILOMACHUS PUGNAX

Tissue	Cases Exposure Route	Range	Mean	General Information
4671 Muscle	10	Not given	0.23+/-0.07 ppm Wet wt	Pectoral muscle. Animals collected (shot) in 1976-77, avg wt 155 g. Sweden, vicinity of Sjaunja Bird Preservation area NA
ADULTS; JUVENILES; TERRESTRIAL; BIRDS; SWEDEN; ENVIRONMENTAL EXPOSURE; FEATHERS; MUSCLES; MERCURY; BIOLOGICAL MONITORING; BIOACCUMU-LATION Lindberg, P. 1984 Bulletin of Environmental Contamination and Toxicology 32:453-459				

Sailfish
ISTIOPHORUS PLATYPTERUS

Tissue	Cases Exposure Route	Range	Mean	General Information
4672 Muscle	4	a) 0.295-0.856 ppm b) 0.225-0.768 ppm	a) 0.550 ppm b) 0.535 ppm	a) Total Hg b) Methyl Hg Collected 1980. Whole fish, shoulder samples. Exponential increase of Hg content at fork length >160 cm. Fork length (beginning of lower jaw to fork of tail) 90-210 cm Indian Ocean (W), Seychelles AAS
SEYCHELLES; INDIAN OCEAN; MUSCLES; BIOACCUMULATION; FISHES; WATER POLLUTION; MERCURY; MERCURY ORGANIC COMPOUNDS Matthews, A.D. 1983 Environmental Research 30:305-312				

Salmon

Tissue	Cases Exposure Route	Range	Mean	General Information
4673 Muscle	10	a) 0.09-0.21 mg/kg b) 0.13-0.31 mg/kg Wet wt	a) 0.16 +or- 0.04 mg/kg b) 0.21 +or- 0.05 mg/kg Wet wt	a) Organic Hg b) Total Hg Canned, 38 samples. Purchased at different retailers. Papua New Guinea, Port Moresby
NEW GUINEA; MUSCLES; MERCURY; FISHES; BIOACCUMULATION; DIETS Kyle, J.H.; Ghani, N. 1983 Science of the Total Environment 26:157-162				

Mercury
7439-97-6
Hg
AtW 200.59,MP -38.87 C, BP 356.72 C, VP 2X10(E-3) mm Hg at 25 C, 100 mm Hg at 260 C

Sandpiper
TRINGA NEBULARIA

Tissue	Cases Exposure Route	Range	Mean	General Information
4674 Muscle	5	Not given	0.44+/-0.08 ppm Wet wt	Pectoral muscle. Animals collected (shot) in 1976-77, avg wt 175 g. Sweden, vicinity of Sjaunja Bird Preservation area NA
ADULTS; JUVENILES; TERRESTRIAL; BIRDS; SWEDEN; ENVIRONMENTAL EXPOSURE; FEATHERS; MUSCLES; MERCURY; BIOLOGICAL MONITORING; BIOACCUMULATION Lindberg, P. 1984 Bulletin of Environmental Contamination and Toxicology 32:453-459				

Sardine

Tissue	Cases Exposure Route	Range	Mean	General Information
4675 Muscle	5	a) 0.04-0.14 mg/kg b) 0.05-0.14 mg/kg Wet wt	a) 0.07 +or- 0.04 mg/kg b) 0.08 +or- 0.04 mg/kg Wet wt	a) Organic Hg b) Total Hg Canned, 38 samples. Purchased at different retailers. Papua New Guinea, Port Moresby
NEW GUINEA; MUSCLES; MERCURY; FISHES; BIOACCUMULATION; DIETS Kyle, J.H.; Ghani, N. 1983 Science of the Total Environment 26:157-162				

Seal, harp
PHOCA GROENLANDICA

Tissue	Cases Exposure Route	Range	Mean	General Information
4676 Blood	144 Ingestion	A) 0.04-0.15 mg/kg b) 0.07+/-0.08 mg/kg c) 0.01+/-0.04 mg/kg d) 0.02+/-0.03 mg/kg e) 0.07+/-0.11 mg/kg f) 0.06+/-0.09 mg/kg Wet wt	a) Not applicable b) Not applicable c) Not applicable d) Not applicable e) Not applicable f) Not applicable	a) Males, Gulf of St. Lawrence b) Females, Gulf of St. Lawrence c) Males, front ice off Newfoundland, Labrador d) Females, front ice off Newfoundland, Labrador e) Males, Grise fiord, Pangnirtung, Greenland f) Females, Grise fiord, Pangnirtung, Greenland Range of means. 1976-78 annual hunt. Statistical analyses included age, sex, site, elements, tissue/organ levels. Levels in females significantly higher than in males. Hg and Se levels correlated (r=0.39). Canada; Greenland; Atlantic Ocean; Arctic

(next page)

Mercury
7439-97-6
Hg
AtW 200.59,MP -38.87 C, BP 356.72 C, VP 2X10(E-3) mm Hg at 25 C, 100 mm Hg at 260 C

Seal, harp
PHOCA GROENLANDICA

(continued)

Tissue	Cases Exposure Route	Range	Mean	General Information
4677 Brain	166 Ingestion	a) 0.08-0.15 mg/kg b) 0.08-0.13 mg/kg c) 0.07-0.21 mg/kg d) 0.09-0.14 mg/kg e) 0.08-0.17 mg/kg f) 0.12-0.14 mg/kg Wet wt	a) Not applicable b) Not applicable c) Not applicable d) Not applicable e) Not applicable f) Not applicable	a) Males, Gulf of St. Lawrence b) Females, Gulf of St. Lawrence c) Males, front ice off Newfoundland, Labrador d) Females, front ice off Newfoundland, Labrador e) Males, Grise fiord, Pangnirtung, Greenland f) Females, Grise fiord, Pangnirtung, Greenland Ranges of means. 1976-78 annual hunt. Statistical analyses included age, sex, site, elements, tissue/organ levels. Adult females significantly higher levels than males. Hg and Se levels correlated (r=0.42). Canada; Greenland; Atlantic Ocean, Arctic
4678 Kidney	236 Ingestion	a) 0.36-1.15 mg/kg b) 0.36-1.04 mg/kg c) 0.75-2.14 mg/kg d) 0.49-1.27 mg/kg e) 0.62-1.17 mg/kg f) 0.60-1.66 mg/kg Wet wt	a) Not applicable b) Not applicable c) Not applicable d) Not applicable e) Not applicable f) Not applicable	a) Males, Gulf of St. Lawrence b) Females, Gulf of St. Lawrence c) Males, front ice off Newfoundland, Labrador d) Females, front ice off Newfoundland, Labrador e) Males, Grise fiord, Pangnirtung, Greenland f) Females, Grise fiord, Pangnirtung, Greenland Range of means. 1976-78 annual hunt. Statistical analyses included age, sex, site, elements, tissue/organ levels. Adult females significantly higher levels than males. Accumulated with age. Canada; Greenland; Atlantic Ocean; Arctic
4679 Liver	215 Ingestion	a) 0.70-13.3 mg/kg b) 0.81-12.7 mg/kg c) 1.46-11.6 mg/kg d) 1.77-3.62 mg/kg e) 3.22-12.4 mg/kg f) 2.82-12.6 mg/kg Wet wt	a) Not applicable b) Not applicable c) Not applicable d) Not applicable e) Not applicable f) Not applicable	a) Males, Gulf of St. Lawrence b) Females, Gulf of St. Lawrence c) Males, front ice off Newfoundland, Labrador d) Females, front ice off Newfoundland, Labrador e) Males, Grise fiord, Pangnirtung, Greenland f) Females, Grise fiord, Pangnirtung, Greenland Range of means. 1976-78 annual hunt. Statistical analyses included age, sex, site, elements, tissue/organ levels. Adult females significantly higher levels than males. Accumulated with age. Hg and Se levels correlated (r=0.87). Canada; Greenland; Atlantic Ocean; Arctic
4680 Muscle	225 Ingestion	a) 0.13-0.35 mg/kg b) 0.12-0.29 mg/kg c) 0.12-0.49 mg/kg d) 0.18-0.31 mg/kg e) 0.26-0.32 mg/kg f) 0.27-0.37 mg/kg Wet wt	a) Not applicable b) Not applicable c) Not applicable d) Not applicable e) Not applicable f) Not applicable	a) Males, Gulf of St. Lawrence b) Females, Gulf of St. Lawrence c) Males, front ice off Newfoundland, Labrador d) Females, front ice off Newfoundland, Labrador e) Males, Grise fiord, Pangnirtung, Greenland f) Females, Grise fiord, Pangnirtung, Greenland Range of means. 1976-78 annual hunt. Statistical analyses included age, sex, site, elements, tissue/organ levels. Adult females significantly higher levels than males. Accumulated with age in a). Canada; Greenland; Atlantic Ocean; Arctic

SEALS; CADMIUM; LEAD; MERCURY; SELENIUM; COPPER; BIOACCUMULATION; BIOLOGICAL MONITORING; CANADA; GREENLAND; BLOOD; KIDNEYS; MUSCLES; LIVER; BRAIN; AGE; ARCTIC; ATLANTIC; SEX; AQUATIC; ENVIRONMENTAL EXPOSURE; WATER POLLUTION

Ronald, K.; Frank, R.J.; Dougan, J.L.; Frank, R.; Braun, H.E. 1984 Science of the Total Environment 38:153-166

Mercury
7439-97-6
Hg
AtW 200.59,MP -38.87 C, BP 356.72 C, VP 2X10(E-3) mm Hg at 25 C, 100 mm Hg at 260 C

Shad, American
ALOSA SAPIDISSIMA

Tissue	Cases Exposure Route	Range	Mean	General Information
4681 Muscle	13 Ingestion	Not given	0.051+/-0.012 ug/g Wet wt	Near Seaside, OR. Mean wt 1039+/-251 g. Mean below FDA action level for food contamination. Pacific Ocean AAS
FISHES; BIOLOGICAL MONITORING; PACIFIC OCEAN; ALUMINUM; BARIUM; CALCIUM; CHROMIUM; COPPER; IRON; MERCURY; POTASSIUM; LITHIUM; MAGNESIUM; MANGANESE; SODIUM; PHOSPHORUS; STRONTIUM; ZINC; AQUATIC; ENVIRONMENTAL EXPOSURE; WATER POLLUTION; FOOD CONTAMINATION; MUSCLES				
Teeny, F.M.; Gauglitz, E.J., Jr.; Hall, A.S.; Houle, C.R. 1984 Journal of Agricultural and Food Chemistry 32:852-855				

Shag, pelagic
PHALACROCORAX PELAGICUS

Tissue	Cases Exposure Route	Range	Mean	General Information
4682 Feathers	2	0.8-10.2 ppm	Not given	Captured 1972-1978. Hg discharged by Chisso Corporation's Minamata Factory until 1968. Collected from abdominal side of wings of stuffed specimens. Levels influenced by feeding habits: predatory mean+/-SD=8.6+/-2.9 ppm. Japan, Shiranui Sea
FEATHERS; BIRDS; TERRESTRIAL; ENVIRONMENTAL EXPOSURE; JAPAN; AQUATIC; MERCURY; INDUSTRIAL POLLUTION; WATER POLLUTION; BIOMAGNIFICATION; BIOACCUMULATION; BIOINDICATORS				
Doi, R.; Ohno, H.; Harada, M. 1984 Science of the Total Environment 40:155-167				

Shark
CARCHARHINUS LIMBATUS

Tissue	Cases Exposure Route	Range	Mean	General Information
4683 Muscle	26	7.29-28.22 ppm Wet wt	12.93+or-4.87 ppm Wet wt	Collected 4/71 Positive correlation with body length. Length 25-80 in. Pacific Ocean, Hawaii AAS
SHARKS; MUSCLES; HAWAII; PACIFIC OCEAN; MERCURY; BIOACCUMULATION; FISHES; WATER POLLUTION				
Boush, G.M.; Thieleke, J.R. 1983 Bulletin of Environmental Contamination and Toxicology 30:284-290				

Mercury
7439-97-6
Hg
AtW 200.59,MP -38.87 C, BP 356.72 C, VP 2X10(E-3) mm Hg at 25 C, 100 mm Hg at 260 C

Shark, tiger
GALEOCERDO CUVIERI

Tissue	Cases Exposure Route	Range	Mean	General Information
4684 Muscle	13	2.09-6.14 ppm Wet wt	4.02+or-1.06 ppm Wet wt	Collected 4/71 Positive correlation with body length. Length 20-150 in. Pacific Ocean, Hawaii AAS
SHARKS; MUSCLES; HAWAII; PACIFIC OCEAN; MERCURY; BIOACCUMULATION; FISHES; WATER POLLUTION				
Boush, G.M.; Thieleke, J.R. 1983 Bulletin of Environmental Contamination and Toxicology 30:284-290				

Sheep
OVIS sp.

Tissue	Cases Exposure Route	Range	Mean	General Information
4685 Bone	a) 8 b) 8 c) 8 Ingestion	a) Not given b) Not given c) Not given	a) 0.02 ug/g b) 0.02 ug/g c) 0.02 ug/g Dry wt	a) Lambs from ewes on basal diet fortified with cottonseed meal b) lambs from ewes on basal diet plus 7% undigested sewage solids Lambs from ewes on basal diet. New Mexico AAS
4686 Kidney	a) 8 b) 8 c) 8 Ingestion	a) Not given b) Not given c) Not given	a) 0.02 ug/g b) 0.02 ug/g c) 0.02 ug/g Dry wt	a) Lambs from ewes on basal diet fortified with cottonseed meal b) Lambs from ewes on basal diet plus 7% undigested sewage solids c) Lambs from ewes on basal diet. New Mexico AAS
4687 Liver	a) 8 b) 8 c) 8 Ingestion	a) Not given b) Not given c) Not given	a) 0.02 ug/g b) 0.02 ug/g c) 0.02 ug/g Dry wt	a) Lambs from ewes on basal diet fortified with cottonseed meal b) Lambs from ewes on basal diet plus 7 % undigested sewage solids c) Lambs from ewes on basal diet. New Mexico AAS
KIDNEYS; LIVER; BONES; SHEEP; TERRESTRIAL; ENVIRONMENTAL EXPOSURE; DELIBERATE EXPOSURE; NEW MEXICO; CADMIUM; CHROMIUM; COPPER; IRON; MERCURY; NICKEL; LEAD; ZINC; METALS; ANIMAL FEEDS; AGRICULTURE; BIOACCUMULATION; BIOLOGICAL MONITORING; FARMS; FOOD CONTAMINATION; LAND POLLUTION; SEWAGE; CALCIUM; BLOOD SERUM; MAGNESIUM; POTASSIUM; PHOSPHORUS; SODIUM				
Hudgens, R.E.; Hallford, D.M. 1984]utrition Reports International 29(1):11-21				

Mercury
7439-97-6
Hg
AtW 200.59,MP -38.87 C, BP 356.72 C, VP 2X10(E-3) mm Hg at 25 C, 100 mm Hg at 260 C

Sole, Dover
MICROSTOMUS PACIFICUS

Tissue	Cases Exposure Route	Range	Mean	General Information
4688 Muscle	Ingestion	a) Not given b) Not given c) Not given d) Not given	a) 0.121+/-0.059 ug/g b) 0.128+/-0.069 ug/g c) 0.101+/-0.059 ug/g d) 0.118+/-0.061 ug/g Wet wt	a) Caught near Newport, OR, 29 fish, mean wt 660+/-326 g b) Cape Ommaney, AK, 11 fish, 506+/-214 g c) Santa Cruz, CA, 10 fish, 212+/-68 g d) Overall mean, combined sites. Low levels, means below FDA action level for food contamination. Pacific Ocean AAS
FISHES; BIOLOGICAL MONITORING; PACIFIC OCEAN; ALUMINUM; BARIUM; CALCIUM; CHROMIUM; COPPER; IRON; MERCURY; POTASSIUM; LITHIUM; MAGNESIUM; MANGANESE; SODIUM; PHOSPHORUS; STRONTIUM; ZINC; AQUATIC; ENVIRONMENTAL EXPOSURE; WATER POLLUTION; FOOD CONTAMINATION; MUSCLES Teeny, F.M.; Gauglitz, E.J., Jr.; Hall, A.S.; Houle, C.R. 1984 Journal of Agricultural and Food Chemistry 32:852-855				

Starling
STURNUS VULGARIS

Tissue	Cases Exposure Route	Range	Mean	General Information
4689 Bone	10 Ingestion	Not applicable	0.7 mg/kg Dry wt	Hg contaminated (1.11 mg/kg) commercial diet for 8 wk. Juveniles. Long bone. Not detected in 4 others. United Kingdom, Huntingdon Nephrotoxic lesions AAS
4690 Gut	10 Ingestion	a) 2.53-5.97 mg/kg b) 1.77-8.1 mg/kg Dry wt	a) 4.25+/-0.34 mg/kg b) 4.73+/-0.75 mg/kg Dry wt S.E.	a) Fore-gut b) Hind-gut Hg-contaminated (1.11 mg/kg) commercial diet for 8 wk. Juveniles. United Kingdom, Huntingdon Nephrotoxic lesions AAS
4691 Kidney	10 Ingestion	21.6-65.2 mg/kg Dry wt	36.3+/-3.98 mg/kg Dry wt S.E.	Hg contaminated (1.11 mg/kg) commercial diet for 8 wk. Juveniles. United Kingdom, Huntingdon Nephrotoxic lesions AAS
4692 Liver	10 Ingestion	2.72-16.9 mg/kg Dry wt	6.55+/-1.11 mg/kg Dry wt S.E.	Hg contaminated (1.11 mg/kg) commercial diet for 8 wk. Juveniles. United Kingdom, Huntingdon Nephrotoxic lesions AAS

(next page)

Mercury
7439-97-6
Hg
AtW 200.59,MP -38.87 C, BP 356.72 C, VP 2X10(E-3) mm Hg at 25 C, 100 mm Hg at 260 C

Starling
STURNUS VULGARIS

(continued)

Tissue	Cases Exposure Route	Range	Mean	General Information
4693 Muscle	9 Ingestion	a) Not detected-2.99 mg/kg b) 0.44-0.35 mg/kg Dry Wt	a) $<$0.89+/-0.25 mg/kg b) 0.15+/-0.08 mg/kg Dry wt S.E.	a) Pectoral muscle, 9 cases b) Heart muscle, 5 cases Hg contaminated diet for 8 wk. Juveniles. United Kingdom, Huntingdon Nephrotoxic lesions AAS
LIVER; KIDNEYS; GUT; PANCREAS; MUSCLES; BONES; TERRESTRIAL; BIRDS; UNITED KINGDOM; JUVENILES; METAL POISONING; MERCURY; ZINC; ACCIDENTAL POISONING; METALS; FOOD CONTAMINATION Nicholson, J.K.; Osborn, D. 1984 Environmental Pollution (Series A-Ecological and Biological) 33:195-206				

Sucker, Tahoe
CATOSTOMUS TAHOENSIS

Tissue	Cases Exposure Route	Range	Mean	General Information
4694 Muscle	5	0.65-1.64 mg/kg Wet wt	0.99 mg/kg Wet wt	Collected Summer 1981, wt 97-320 g Nevada, Lahontan Reservoir AAS
NEVADA; ADULTS; JUVENILES; BODY; HEART; MUSCLES; LIVER; ABDOMEN; EGGS; BIOACCUMULATION; FISHES; WATER POLLUTION; MERCURY; CRUSTACEANS Cooper, J.J. 1983 Bulletin of Environmental Contamination and Toxicology 31:9-17				

Teal, common
ANAS CRECCA

Tissue	Cases Exposure Route	Range	Mean	General Information
4695 Muscle	6	Not given	0.09+/-0.04 ppm Wet wt	Pectoral muscle. Animals collected (shot) in 1976-77, avg wt 300 g. Sweden, vicinity of Sjaunja Bird Preservation area NA
ADULTS; JUVENILES; TERRESTRIAL; BIRDS; SWEDEN; ENVIRONMENTAL EXPOSURE; FEATHERS; MUSCLES; MERCURY; BIOLOGICAL MONITORING; BIOACCUMULATION Lindberg, P. 1984 Bulletin of Environmental Contamination and Toxicology 32:453-459				

Mercury
7439-97-6
Hg
AtW 200.59,MP -38.87 C, BP 356.72 C, VP 2X10(E-3) mm Hg at 25 C, 100 mm Hg at 260 C

Thrush
TURDUS PILARIS

Tissue	Cases Exposure Route	Range	Mean	General Information
4696 Muscle	5	Not given	0.07+/-0.03 ppm Wet wt	Pectoral muscle. Animals collected (shot) in 1976-77, avg wt 105 g. Sweden, vicinity of Sjaunja Bird Preservation area NA

ADULTS; JUVENILES; TERRESTRIAL; BIRDS; SWEDEN; ENVIRONMENTAL EXPOSURE; FEATHERS; MUSCLES; MERCURY; BIOLOGICAL MONITORING; BIOACCUMULATION
Lindberg, P. 1984 Bulletin of Environmental Contamination and Toxicology 32:453-459

Thrush, dusky
TURDUS NAUMANNI

Tissue	Cases Exposure Route	Range	Mean	General Information
4697 Feathers	1	Not given	1.4 ppm	Captured 1967 Hg discharged by Chisso Corporation's Minamata Factory until 1968. Collected from abdominal side of wings of stuffed specimens. Levels influenced by feeding habits: Omnivorous terrestrial mean+/-SD=1.5+/-1.2 ppm. Japan, Shiranui Sea

FEATHERS; BIRDS; TERRESTRIAL; ENVIRONMENTAL EXPOSURE; JAPAN; AQUATIC; MERCURY; INDUSTRIAL POLLUTION; WATER POLLUTION; BIOMAGNIFICATION; BIOACCUMULATION; BIOINDICATORS
Doi, R.; Ohno, H.; Harada, M. 1984 Science of the Total Environment 40:155-167

Thrush, red-bellied rock
MONTICOLA SOLITARIUS

Tissue	Cases Exposure Route	Range	Mean	General Information
4698 Feathers	1	Not given	1.3 ppm	a) Captured 1959 b) 1971-1978 Hg discharged by Chisso Corporation's Minamata Factory until 1968. Collected from abdominal side of wings of stuffed specimens. Levels influenced by feeding habits: Omnivorous aquatic mean+/-SD=5.5+/-5.6 ppm. Japan, Shiranui Sea

FEATHERS; BIRDS; TERRESTRIAL; ENVIRONMENTAL EXPOSURE; JAPAN; AQUATIC; MERCURY; INDUSTRIAL POLLUTION; WATER POLLUTION; BIOMAGNIFICATION; BIOACCUMULATION; BIOINDICATORS
Doi, R.; Ohno, H.; Harada, M. 1984 Science of the Total Environment 40:155-167

Mercury
7439-97-6
Hg
AtW 200.59,MP -38.87 C, BP 356.72 C, VP 2X10(E-3) mm Hg at 25 C, 100 mm Hg at 260 C
Trout, rainbow
SALMO GAIRDNERI

Tissue	Cases Exposure Route	Range	Mean	General Information
4690 Blood	a) 10 b) 10 c) 10 d) 10 e) 10 f) 10 g) 10 h) 10 i) 10 j) 10 k) 10 l) 10	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given g) Not given h) Not given i) Not given j) Not given k) Not given l) Not given	a) 2.2 ug/g b) 0.6 ug/g c) 0.4 ug/g d) 0.2 ug/g e) 0.2 ug/g f) 0.2 ug/g g) 6.2 ug/g h) 1.3 ug/g i) 1.5 ug/g j) 1.4 ug/g k) 0.9 ug/g l) 0.5 ug/g	a) 0 days b) 17 d c) 31 d d) 56 d e) 120 d f) 250 d g) 0 d h) 17 d i) 31 d j) 56 d k) 120 d l) 250 d 100 ug Hg/l as Hg-Cl2 in a)-f). 20 ug Hg/l as CH3-Hg-Cl in g)-l). Times given are after 3-d exposures. Wt 60-80 g at outset. Values estimated from graph. France, Talence AAS
4700 Brain	a) 10 b) 10 c) 10 d) 10 e) 10 f) 10 g) 10 h) 10 i) 10 j) 10 k) 10 l) 10	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given g) Not given h) Not given i) Not given j) Not given k) Not given l) Not given	a) 1.0 ug/g b) 1.1 ug/g c) 0.85 ug/g d) 0.92 ug/g e) 0.75 ug/g f) 0.6 ug/g g) 0.6 ug/g h) 0.95 ug/g i) 0.75 ug/g j) 0.82 ug/g k) 0.5 ug/g l) 0.2 ug/g	a) 0 days b) 17 d c) 31 d d) 56 d e) 120 d f) 250 d g) 0 d h) 17 d i) 31 d j) 56 d k) 120 d l) 250 d 100 ug Hg/l as Hg-Cl2 in a)-f). 20 ug Hg/l as CH3-Hg-Cl in g)-l). Times given are after 3-d exposures. Wt 60-80 g at outset. Values estimated from graph. France, Talence AAS

(next page)

Mercury
7439-97-6
Hg
AtW 200.59,MP -38.87 C, BP 356.72 C, VP 2X10(E-3) mm Hg at 25 C, 100 mm Hg at 260 C

Trout, rainbow
SALMO GAIRDNERI

(continued)

Tissue	Cases Exposure Route	Range	Mean	General Information
4701 Gills	a) 10 b) 10 c) 10 d) 10 e) 10 f) 10 g) 10 h) 10 i) 10 j) 10 k) 10 l) 10	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given g) Not given h) Not given i) Not given j) Not given k) Not given l) Not given	a) 13.0 ug/g b) 3.0 ug/g c) 1.0 ug/g d) 0.2 ug/g e) 0.2 ug/g f) 0.2 ug/g g) 8.8 ug/g h) 0.4 ug/g i) 0.3 ug/g j) 0.3 ug/g k) 0.3 ug/g l) 0.3 ug/g	a) 0 days b) 17 d c) 31 d d) 56 d e) 120 d f) 250 d g) 0 d h) 17 d i) 31 d j) 56 d k) 120 d l) 250 d 100 ug Hg/l as Hg-Cl2 in a)-f). 20 ug Hg/l as CH3-Hg-Cl in g)-l). Times given are after 3-d exposures. Wt 60-80 g at outset. Values estimated from graph. France, Talence AAS
4702 Intestine	a) 10 b) 10 c) 10 d) 10 e) 10 f) 10 g) 10 h) 10 i) 10 j) 10 k) 10 l) 10	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given g) Not given h) Not given i) Not given j) Not given k) Not given l) Not given	a) 1.1 ug/g b) 0.5 ug/g c) 0.3 ug/g d) 0.25 ug/g e) 0.2 ug/g f) 0.1 ug/g g) 2.25 ug/g h) 0.08 ug/g i) 0.4 ug/g j) 0.3 ug/g k) 0.25 ug/g l) 0.1 ug/g	a) 0 days b) 17 d c) 31 d d) 56 d e) 120 d f) 250 d g) 0 d h) 17 d i) 31 d j) 56 d k) 120 d l) 250 d 100 ug Hg/l as Hg-Cl2 in a)-f). 20 ug Hg/l as CH3-Hg-Cl in g)-l). Times given are after 3-d exposures. Wt 60-80 g at outset. Values estimated from graph. France, Talence AAS

(next page)

Mercury
7439-97-6
Hg
AtW 200.59,MP -38.87 C, BP 356.72 C, VP 2X10(E-3) mm Hg at 25 C, 100 mm Hg at 260 C

Trout, rainbow
SALMO GAIRDNERI

(continued)

Tissue	Cases Exposure Route	Range	Mean	General Information
4703 Kidney	a) 10 b) 10 c) 10 d) 10 e) 10 f) 10 g) 10 h) 10 i) 10 j) 10 k) 10 l) 10	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given g) Not given h) Not given i) Not given j) Not given k) Not given l) Not given	a) 12.5 ug/g b) 14.8 ug/g c) 14.0 ug/g d) 11.0 ug/g e) 13.0 ug/g f) 8.5 ug/g g) 4.0 ug/g h) 1.5 ug/g i) 1.0 ug/g j) 1.5 ug/g k) 0.5 ug/g l) 0.5 ug/g	a) 0 days b) 17 d c) 31 d d) 56 d e) 120 d f) 250 d g) 0 d h) 17 d i) 31 d j) 56 d k) 120 d l) 250 d 100 ug Hg/l as Hg-Cl2 in a)-f). 20 ug Hg/l as CH3-Hg-Cl in g)-l). Times given are after 3-d exposures. Wt 60-80 g at outset. Values estimated from graph. France, Talence AAS
4704 Muscle	a) 10 b) 10 c) 10 d) 10 e) 10 f) 10 g) 10 h) 10 i) 10 j) 10 k) 10 l) 10	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given g) Not given h) Not given i) Not given j) Not given k) Not given l) Not given	a) 0.4 ug/g b) 0.85 ug/g c) 0.7 ug/g d) 0.75 ug/g e) 0.52 ug/g f) 0.22 ug/g g) 0.13 ug/g h) 0.10 ug/g i) 0.08 ug/g j) 0.08 ug/g k) 0.06 ug/g l) 0.04 ug/g	a) 0 days b) 17 d c) 31 d d) 56 d e) 120 d f) 250 d g) 0 d h) 17 d i) 31 d j) 56 d k) 120 d l) 250 d 100 ug Hg/l as Hg-Cl2 in a)-f). 20 ug Hg/l as CH3-Hg-Cl in g)-l). Times given are after 3-d exposures. Wt 60-80 g at outset. Values estimated from graph. France, Talence AAS

(next page)

Mercury
7439-97-6
Hg
AtW 200.59,MP -38.87 C, BP 356.72 C, VP 2X10(E-3) mm Hg at 25 C, 100 mm Hg at 260 C

Trout, rainbow
SALMO GAIRDNERI

(continued)

Tissue	Cases Exposure Route	Range	Mean	General Information
4705 Spleen	a) 10	a) Not given	a) 5.3 ug/g	a) 0 days
	b) 10	b) Not given	b) 4.2 ug/g	b) 17 d
	c) 10	c) Not given	c) 3.0 ug/g	c) 31 d
	d) 10	d) Not given	d) 2.8 ug/g	d) 56 d
	e) 10	e) Not given	e) 2.9 ug/g	e) 120 d
	f) 10	f) Not given	f) 1.4 ug/g	f) 250 d
	g) 10	g) Not given	g) 6.0 ug/g	g) 0 d
	h) 10	h) Not given	h) 2.0 ug/g	h) 17 d
	i) 10	i) Not given	i) 1.0 ug/g	i) 31 d
	j) 10	j) Not given	j) 1.2 ug/g	j) 56 d
	k) 10	k) Not given	k) 0.5 ug/g	k) 120 d
	l) 10	l) Not given	l) 0.5 ug/g	l) 250 d
				100 ug Hg/l as Hg-Cl2 in a)-f). 20 ug Hg/l as CH3-Hg-Cl in g)-l). Times given are after 3-d exposures. Wt 60-80 g at outset. Values estimated from graph.
				France, Talence AAS

LIVER; BRAIN; MUSCLES; INTESTINES; KIDNEYS; SPLEEN; BLOOD; FISHES; AQUATIC; DELIBERATE EXPOSURE; FRANCE; MERCURY; MERCURY INORGANIC COMPOUNDS; MERCURY ORGANIC COMPOUNDS; METHYL MERCURY COMPOUNDS; WATER POLLUTION

Ribeyre, F.; Boudou, A. 1984 Environmental Pollution 35:203-228

Tuna

Tissue	Cases Exposure Route	Range	Mean	General Information
4706 Muscle		a) 0.12-0.78 mg/kg b) 0.13-1.01 mg/kg Wet wt	a) 0.35 +or- 0.17 mg/kg b) 0.45 +or - 0.22 mg/kg Wet wt	a) Organic Hg b) Total Hg Canned, 38 samples. Purchased at different retailers. Papua New Guinea, Port Moresby

NEW GUINEA; MUSCLES; MERCURY; FISHES; BIOACCUMULATION; DIETS

Kyle, J.H.; Ghani, N. 1983 Science of the Total Environment 26:157-162

Mercury
7439-97-6
Hg
AtW 200.59,MP -38.87 C, BP 356.72 C, VP 2X10(E-3) mm Hg at 25 C, 100 mm Hg at 260 C

Tuna, bigeye
THUNNUS OBESUS

Tissue	Cases Exposure Route	Range	Mean	General Information
4707 Muscle	104	0.30-0.87 ppm	0.58 +or- 0.13 ppm	Samples from caudal peduncle area. Wt 47-224 lb, 0.02 ppm increase for each 10 lb of wt. Hawaii AAS
HAWAII; MUSCLES ; BIOACCUMULATION; FISHES; WATER POLLUTION; MERCURY				
Boush, G.M.; Thielecke, J.R. 1983 Bulletin of Environmental Contamination and Toxicology 30:291-297				

Tuna, dogtooth
GYMNOSARDA UNICOLOR

Tissue	Cases Exposure Route	Range	Mean	General Information
4708 Muscle	5	a) 0.844-1.96 ppm b) 0.779-2.075 ppm	a) 1.221 ppm b) 1.277 ppm	a) Total Hg b) Methyl Hg Collected 1980. Gutted fish, shoulder samples. Positive correlation between Hg content and wt. Wt 8.1-25.0 kg Indian Ocean (W), Seychelles AAS
SEYCHELLES; INDIAN OCEAN; MUSCLES; BIOACCUMULATION; FISHES; WATER POLLUTION; MERCURY; MERCURY ORGANIC COMPOUNDS				
Matthews, A.D. 1983 Environmental Research 30:305-312				

Tuna, skipjack
KATSUWONUS PELAMIS

Tissue	Cases Exposure Route	Range	Mean	General Information
4709 Muscle	5	a) 0.191-0.450 ppm b) 0.177-0.505 ppm	a) 0.290 ppm b) 0.316 ppm	a) Total Hg b) Methyl Hg Collected 1980. Whole, ungutted fish, shoulder samples. Positive correlation between Hg content and wt. Wt 4.0-5.6 kg Indian Ocean (W), Seychelles AAS
SEYCHELLES; INDIAN OCEAN; MUSCLES; BIOACCUMULATION; FISHES; WATER POLLUTION; MERCURY; MERCURY ORGANIC COMPOUNDS				
Matthews, A.D. 1983 Environmental Research 30:305-312				

Mercury
7439-97-6
Hg
AtW 200.59,MP -38.87 C, BP 356.72 C, VP 2X10(E-3) mm Hg at 25 C, 100 mm Hg at 260 C

Tuna, yellowfin
THUNNUS OBESUS

Tissue	Cases Exposure Route	Range	Mean	General Information
4710 Muscle	100	0.09-0.39 ppm	0.22 +or- 0.06 ppm	Samples from caudal peduncle area. Wt 22-186 lb, 0.02 ppm increase for each 10 lb of wt. Hawaii AAS
HAWAII; MUSCLES ; BIOACCUMULATION; FISHES; WATER POLLUTION; MERCURY				
Boush, G.M.; Thielecke, J.R. 1983 Bulletin of Environmental Contamination and Toxicology 30:291-297				

Tissue	Cases Exposure Route	Range	Mean	General Information
4711 Muscle	5	a) 0.086-0.368 ppm b) 0.056-0.368 ppm	a) 0.231 ppm b) 0.206 ppm	a) Total Hg b) Methyl Hg Collected 1980. Whole, ungutted fish, shoulder samples. Positive correlation between Hg content and wt. Wt 5.3-24.0 kg Indian Ocean (W), Seychelles AAS
SEYCHELLES; INDIAN OCEAN; MUSCLES; BIOACCUMULATION; FISHES; WATER POLLUTION; MERCURY; MERCURY ORGANIC COMPOUNDS				
Matthews, A.D. 1983 Environmental Research 30:305-312				

Vara vara
LUTJANUS BOHAR

Tissue	Cases Exposure Route	Range	Mean	General Information
4712 Muscle	5	a) 0.277-0.465 ppm b) 0.287-0.456 ppm	a) 0.397 ppm b) 0.375 ppm	a) Total Hg b) Methyl Hg Collected 1980. Gilled, gutted fish, shoulder samples. Positive correlation between Hg content and wt. Wt 1.8-8.6 kg Indian Ocean (W), Seychelles AAS
SEYCHELLES; INDIAN OCEAN; MUSCLES; BIOACCUMULATION; FISHES; WATER POLLUTION; MERCURY; MERCURY ORGANIC COMPOUNDS				
Matthews, A.D. 1983 Environmental Research 30:305-312				

Mercury
7439-97-6
Hg
AtW 200.59,MP -38.87 C, BP 356.72 C, VP 2X10(E-3) mm Hg at 25 C, 100 mm Hg at 260 C

Whimbrel
NUMENIUS PHAEOPUS

Tissue	Cases Exposure Route	Range	Mean	General Information
4713 Muscle	4	Not given	0.12+/-0.03 ppm Wet wt	Pectoral muscle. Animals collected (shot) in 1976-77, avg wt 375 g. Sweden, vicinity of Sjaunja Bird Preservation area NA

ADULTS; JUVENILES; TERRESTRIAL; BIRDS; SWEDEN; ENVIRONMENTAL EXPOSURE; FEATHERS; MUSCLES; MERCURY; BIOLOGICAL MONITORING; BIOACCUMULATION
Lindberg, P. 1984 Bulletin of Environmental Contamination and Toxicology 32:453-459

Whiting, Pacific
MERLUCCIUS PRODUCTUS

Tissue	Cases Exposure Route	Range	Mean	General Information
4714 Muscle	a) 20 b) 32 Ingestion	a) Not given b) Not given	a) 0.115+/-0.048 ug/g b) 0.113+/-0.028 ug/g Wet wt	a) Near Astoria, OR, mean wt 873+/-246 g b) Refrigerated 2 d in seawater, Astoria, OR, 937+/-227 g. Low levels, means below FDA action level for food contamination. Pacific Ocean AAS

FISHES; BIOLOGICAL MONITORING; PACIFIC OCEAN; ALUMINUM; BARIUM; CALCIUM; CHROMIUM; COPPER; IRON; MERCURY; POTASSIUM; LITHIUM; MAGNESIUM; MANGANESE; SODIUM; PHOSPHORUS; STRONTIUM; ZINC; AQUATIC; ENVIRONMENTAL EXPOSURE; WATER POLLUTION; FOOD CONTAMINATION; MUSCLES
Teeny, F.M.; Gauglitz, E.J., Jr.; Hall, A.S.; Houle, C.R. 1984 Journal of Agricultural and Food Chemistry 32:852-855

Mercury chloride

7487-94-7
Cl2-Hg
MW 271.52, MP 276 C, BP 302 C, VP 1 mm Hg at 136.2 C

Trout, rainbow
SALMO GAIRDNERI

Tissue	Cases Exposure Route	Range	Mean	General Information
4715 Liver	a) 10 b) 10 c) 10 d) 10 e) 10 f) 10 g) 10 h) 10 i) 10 j) 10 k) 10 l) 10	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given g) Not given h) Not given i) Not given j) Not given k) Not given l) Not given	a) 4.25 ug/g b) 5.0 ug/g c) 3.25 ug/g d) 2.9 ug/g e) 3.3 ug/g f) 0.9 ug/g g) 4.0 ug/g h) 2.2 ug/g i) 1.2 ug/g j) 1.1 ug/g k) 0.9 ug/g l) 0.25 ug/g	a) 0 days b) 17 d c) 31 d d) 56 d e) 120 d f) 250 d g) 0 d h) 17 d i) 31 d j) 56 d k) 120 d l) 250 d 100 ug Hg/l as Hg-Cl2 in a)-f). 20 ug Hg/l as CH3-Hg-Cl in g)-l). Times given are after 3-d exposures. Wt 60-80 g at outset. Values estimated from graph. France, Talence AAS

LIVER; BRAIN; MUSCLES; INTESTINES; KIDNEYS; SPLEEN; BLOOD; FISHES; AQUATIC; DELIBERATE EXPOSURE; FRANCE; MERCURY; MERCURY INORGANIC COMPOUNDS; MERCURY ORGANIC COMPOUNDS; METHYL MERCURY COMPOUNDS; WATER POLLUTION

Ribeyre, F.; Boudou, A. 1984 Environmental Pollution 35:203-228

Mercury(1+), methyl-, ion (8 CI); Mercury(1+), methyl- (9 CI)

22967-92-6
C-H3-Hg
MW 215.63

Dolphin, striped
STENELLA COERULEOALBA

Tissue	Cases Exposure Route	Range	Mean	General Information
4716 Adipose	a) 18 b) 4	a) Not given b) Not given	a) 0.34+/-0.19 ug/g b) 0.022+/-0.015 ug/g Wet wt	a) Mature animals collected 1977-80 b) Immature animals collected 1977-78 Maturity defined as females having ovaries with corpora lutea or albicans, or males having testes of 15.5 g or more. Methylated form was 9.7% of total Hg content in mature, 18% in immature. Pacific Ocean AAS
4717 Brain	a) 7 b) 7	a) Not given b) Not given	a) 1.1+/-0.3 ug/g b) 0.81+/-0.15 ug/g Wet wt	a) Cerebrum b) Cerebellum Mature animals collected 1977-80. Methylated form was 11% of total Hg content in cerebrum, 35% in cerebellum. Pacific Ocean AAS

(next page)

Mercury(1+), methyl-, ion (8 CI); Mercury(1+), methyl- (9 CI)
22967-92-6
C-H3-Hg
MW 215.63
Dolphin, striped
STENELLA COERULEOALBA

(continued)

Tissue	Cases Exposure Route	Range	Mean	General Information
4718 Diaphragm	15	Not given	4.6+/-2.1 ug/g Wet wt	Mature animals collected 1977 80. Methylated form was 46% of total Hg content. Pacific Ocean AAS
4719 Heart	a) 15 b) 3	a) Not given b) Not given	a) 3.7+/-1.2 ug/g b) 1.08+/-0.66 ug/g Wet wt	a) Mature animals collected 1977-80 b) Immature animals collected 1977-78 Maturity defined as females having ovaries with a corpora lutea or albicans, or males having testes of 15.5 g or more. Methylated form was 61% of total Hg content in mature, 83% in immature. Pacific Ocean AAS
4720 Intestine	15	Not given	1.7+/-0.7 ug/g Wet wt	Mature animals collected 1977-80. Methylated form was 29% of total Hg content. Pacific Ocean AAS
4721 Kidney	a) 14 b) 4	a) Not given b) Not given	a) 3.2+/-0.8 ug/g b) 1.22+/-0.69 ug/g Wet wt	a) Mature animals collected 1977-80 b) Immature animals collected 1977-78 Maturity defined as females having ovaries with corpora lutea or albicans, or males having testes of 15.5 g or more. Methylated form was 22% of total Hg content in mature, 36% in immature. Pacific Ocean AAS
4722 Liver	a) 15 b) 4	a) Not given b) Not given	a) 7.0+/-1.8 ug/g b) 1.65+/-1.01 ug/g Wet wt	a) Mature animals collected 1977-80 b) Immature animals collected 1977-78 Maturity defined as females having ovaries with corpora lutea or albicans, or males having testes of 15.5 g or more. Methylated form was 3.4% of total Hg content in mature, 28% in immature. Pacific Ocean AAS
4723 Lung	15	Not given	1.3+/-1.3 ug/g Wet wt	Mature animals collected 1977-80. Methylated form was 7.6% of total Hg content. Pacific Ocean AAS
4724 Muscle	a) 26 b) 4	a) Not given b) Not given	a) 5.3+/-0.8 ug/g b) 1.22+/-0.24 ug/g Wet wt	a) Mature animals collected 1977-80 b) Immature animals collected 1977-78 Maturity defined as females having ovaries with corpora lutea or albicans, or males having testes of 15.5 g or more. Methylated form was 35% of total Hg content in mature, 96% in immature. Pacific Ocean AAS

(next page)

Mercury(1+), methyl-, ion (8 CI); Mercury(1+), methyl- (9 CI)
22967-92-6
C-H3-Hg
MW 215.63

Dolphin, striped
STENELLA COERULEOALBA

(continued)

Tissue	Cases Exposure Route	Range	Mean	General Information
4725 Pancreas	a) 14 b) 4	a) Not given b) Not given	a) 1.5+/-0.5 ug/g b) 0.38+/-0.08 ug/g Wet wt	a) Mature animals collected 1977-80 b) Immature animals collected 1977-78 Maturity defined as females having ovaries with corpora lutea or albicans, or males having testes of 15.5 g or more. Methylated form was 9.9% of total Hg content in mature, 81% in immature. Pacific Ocean AAS
4726 Spleen	a) 14 b) 4	a) Not given b) Not given	a) 2.3+/-0.05 ug/g b) 0.56+/-0.14 ug/g Wet wt	a) Mature animals collected 1977-80 b) Immature animals collected 1977-78 Maturity defined as females having ovaries with corpora lutea or albicans, or males having testes of 15.5 g or more. Methylated form was 10% of total Hg content in mature, 73% in immature. Pacific Ocean AAS
4727 Stomach	19	a) Not given b) Not given d) Not given	a) 2.2+/-0.5 ug/g b) 2.0+/-0.7 ug/g c) 0.80+/-0.10 ug/g Wet wt	a) First stomach, mature animals collected 1977-80, 15 cases b) Second stomach, mature animals collected 1977-80, 15 cases c) First stomach, immature animals collected 1977-78, 4 cases Maturity defined as females having ovaries with corpora lutea or albicans, or males having testes of 15.5 g or more. Methylated form was 31% of total Hg content in mature first stomach, 24% in mature second stomach, and 84% in immature first stomach. Pacific Ocean AAS
ADIPOSE TISSUE; MUSCLES; PANCREAS; SPLEEN; KIDNEYS; LIVER; STOMACH; INTESTINES; LUNGS; DIAPHRAGM; BRAIN; BLOOD; DOLPHINS; AQUATIC; ENVIRONMENTAL EXPOSURE; PACIFIC OCEAN; JUVENILES; ADULTS; MERCURY; METHYLMERCURY; SELENIUM; METALS; BIOACCUMULATION; WATER POLLUTION				
Itano, K.; Kawai, S.; Miyazaki, N.; Tatsukawa, R.; Fujiyama, T. 1984 Agricultural Biology and Chemistry 48(5):1109-1116				

Trout, rainbow
SALMO GAIRDNERI

Tissue	Cases Exposure Route	Range	Mean	General Information
4728 Body	a) 50 b) 50 c) 50 Ingestion	a) 19+/-3-23+/-10 ug/kg b) 20+/-4-53+/-14 ug/kg c) 23+/-6-12,000+/-2,800 ug/kg	a) Not applicable b) Not applicable c) Not applicable	a) Controls, 0-75 d, plateau b) Continual exposure to 13 ng/l, 0-75 d, peaks (45+/-10 and 53+/-14 ug/kg) at 8 and 75 d c) Continual exposure to 150 ng/l, 0-75 d, gradual increase 5 time points/study, 10 fish/time point. Accumulation did not affect differential red and white blood cell ratios. Canada AAS
BODY; FISHES; AQUATIC; DELIBERATE EXPOSURE; CANADA; METAL POISONING; CHLOROBENZENES; METHYL MERCURY COMPOUNDS; BIOACCUMULATION				
Niimi, A.J.; Lowe-Jinde, L. 1984 Archives of Environmental Contamination and Toxicology 13:303-311				

Methanaminium, 1-carboxy-N,N,N-trimethyl-, chloride
590-46-5
C5-H12-N-O2.Cl
MW 153.61, MP approx 227 C (dec)
Swine
SUS sp.

Tissue	Cases Exposure Route	Range	Mean	General Information
4729 Fetus	30	Not given	1.36X10(E-4)+/-1.17 mg/g	Fetuses removed 2 hr after 5 mg/kg to dam on gestation day 109. (Normal gestation 112 day). Hormel miniature FDA strain X Hormel miniature FDA strain. Radiometry
SWINE; BIOACCUMULATION; FETUS; BLOOD; BRAIN; FETAL MEMBRANES; KIDNEYS; LIVER; LUNGS; TERRESTRIAL; DELIBERATE EXPOSURE				
Ikeda, G.J.; Miller, E.; Sapienza, P.P.; Michel, T.C.; King, M.T.; Turner, V.A.; Blumenthal, H.; Jackson, W.E., III; Levin, S. 1983 Food, Cosmetic Toxicology 21(1):49-58				

Methionine, L- (8 CI); L-Methionine (9 CI)
63-68-3
C5-H11-N-O2-S
MW 149.21, MP 280-282 C
Sheep
OVIS sp.

Tissue	Cases Exposure Route	Range	Mean	General Information
4730 Blood, plasma	8 Ingestion	a) Not given b) Not given c) Not given d) Not given	a) 1.64 umol/100 ml b) 2.04 umol/100 ml c) 3.56 umol/100 ml d) 4.00 umol/100 ml	a) Controls, 0 g b) Controls, 3 g c) 3 g protected d) 6 g protected Protection from ruminal degradation afforded by imbedding methionine in lipid/protein matrix prior to ingestion. Method increased absorption. Kentucky Ion-exchange chromatography
BLOOD PLASMA; URINE; SHEEP; TERRESTRIAL; KENTUCKY; DELIBERATE EXPOSURE; JUVENILES; NUTRITIONAL DEFICIENCIES; AMINO ACIDS; NITROGEN; LIPIDS; BIOACCUMULATION; FOOD ADDITIVES; ANIMAL FEEDS; METABOLISM				
Smith, S.I.; Boling, J.A. 1984 Journal of Animal Science 58(1):187-193				

Methylnaphthalenemethanol (No postings in CHEMLINE).
Sole, English
PAROPHRYS VETULUS

Tissue	Cases Exposure Route	Range	Mean	General Information
4731 Bile	1	Not applicable	90 ng/g Wet wt	Levels significantly higher than in fish from unpolluted Meadow Point area. Washington, Duwamish Waterway GC/MS
BILE; AQUATIC; FISHES; ENVIRONMENTAL EXPOSURE; WASHINGTON; LIVER DISEASES; NEOPLASMS; MEASUREMENT METHODS; BIPHENYL COMPOUNDS; POLYCYCLIC AROMATIC HYDROCARBONS; BIOACCUMULATION; METABOLITES; URBAN AREAS; WATER POLLUTION				
Krahn, M.M.; Myers, M.S.; Burrows, D.G.; Malins, D.C. 1984 Xenobiotica 14:633-646				

Molybdenum
7439-98-7
Mo
AtW 95.94, MP 2622 C, BP 4825 C (approx), VP 1 mm Hg at 3300 C, 10 mm Hg at 3770 C

Sheep
OVIS sp.

Tissue	Cases Exposure Route	Range	Mean	General Information
4732 Liver	a) 6 b) 8 c) 5 d) 8 Ingestion	a) Not given b) Not given c) Not given d) Not given	a) 2.23+/-0.88 ug/g b) 2.33+/-0.97 ug/g c) 3.94+/-23.13 ug/g d) 4.70+/-1.13 ug/g Dry wt S.E.	a) 6/81 before treatment with Mo-S b) 8/81 during treatment c) 9/81 during treatment d) 10/81 after treatment Chronic Cu poisoning in flock at Animal Research Centre, diet moderate in Cu, low in Mo and S. Treated with 0.1 g ammonium molybdate and 1 g sodium sulfate/d. Levels increased throughout study period. Dramatic reduction in deaths. Canada, Ottawa AAS
SHEEP; ACCIDENTAL POISONING; COPPER; DIETS; CANADA; TERRESTRIAL; MOLYBDENUM; LIVER; URINE; AUTOPSIES; ANIMAL FEEDS; ENZYMES; CHELATING AGENTS; DELIBERATE EXPOSURE Hidiroglou, M.; Heaney, D.P.; Hartin, K.E. 1984 Canadian Veterinary Journal 25:377-382				

Morphinan-3,6alpha-diol, 7,8-didehydro-4,5alpha-epoxy-17-methyl- (8 CI); Morphinan-3,6-diol, 7,8-didehydro-4,5-epoxy-17-methyl-(5alpha,6alpha)- (9 CI)
57-27-2
C17-H19-N-O3
MW 285.33, MP 197 C (metastable phase), 254 C (decomp)

Horse

Tissue	Cases Exposure Route	Range	Mean	General Information
4733 Blood, serum	4 Ingestion	624-2 ng/ml	Not applicable	0.08-9 hr, peak (624 ng/ml) immediately after 0.1 mg/kg IV. Rapid decline to 50 ng/ml in 30 min, moderate decline thereafter. Range of means. Data estimated from graph. GC
4734 Urine	4 Ingestion	a) 22,000-0.5 ng/ml b) 3000-0.4 ng/ml	a) Not applicable b) Not applicable	a) 2-120 hr, peak (22,000 ng/ml) 2 hr after 0.1 mg/kg IV. Bound and unbound forms b) 2-120 hr, peak (3000 ng/ml) 2 hr after 0.1 mg/kg IV. Unbound form Samples collected by bladder catheterization. GC
BLOOD SERUM; URINE; HORSES; DELIBERATE EXPOSURE; ANALGESICS; NARCOTICS; BIOACCUMULATION Combie, J.D.; Nugent, T.E.; Tobin, T. 1983 American Journal of Veterinary Research 44(5):870-874				

Morphinan-3alpha-ol, 4,5alpha-epoxy-3-methoxy-17-methyl- (8 CI); Morphinan-6-ol, 4,5-epoxy-3-methoxy-17-methyl-, (5alpha,6alpha)- (9 CI)
125-28-0
C18-H23-N-O3
MW 301.37, MP 112-113 C, BP 248 C at 15 mm Hg

Swine
SUS sp.

Tissue	Cases Exposure Route	Range	Mean	General Information
4735 Liver	9 Ingestion	</=8-40 pCi/kg Wet wt	13 pCi/kg Median Wet wt	Approximately 1 yr old, collected from farms near Munich. Germany GE/Li detection
LIVER; SWINE; SHEEP; CHICKENS; TURKEYS; DEER; CHAMOIS; TERRESTRIAL; ENVIRONMENTAL EXPOSURE; GERMANY; CESIUM; PLUTONIUM; RADIONUCLIDES; BIOACCUMULATION; FALLOUT; FOOD CONTAMINATION Bunzl, K.; Kracke, W. 1984 Health Physics 46(2):466-470				

n-Alkanes (No postings in CHEMLINE).
n-C12-n-C33
Cattle
BOS sp.

Tissue	Cases Exposure Route	Range	Mean	General Information
4736 Adipose	11 Ingestion	a) 0.22-11.77 mg/kg b) 0.07-3.47 mg/kg c) 0.15-8.30 mg/kg d) 0.70-22.93 mg/kg e) 0.04-6.39 mg/kg f) 0.40-14.96 mg/kg Wet wt	a) 3.9+/-4.1 mg/kg b) 1.2+/-1.2 mg/kg c) 2.8+/-2.9 mg/kg d) 6.3+/-8.2 mg/kg e) 2.2+/-2.9 mg/kg f) 4.1+/-5.4 mg/kg Wet wt	a) Subcutaneous, n-C12-C33 total b) Subcutaneous, odd-numbered C's, 5-50% of total c) Subcutaneous, even-numbered C's, 95-50% of total d) Perirenal, n-C12-C33 total e) Perirenal, odd-numbered C's, 6-60% of total f) Perirenal, even-numbered C's, 94-40% of total 4 mo old suckling calves. Powdered milk formula. Adults contained no odd n-C23-n-C33 as found in vegetable products. Italy, Rome CC; TLC; GC
4737 Heart	11 Ingestion	a) 0.30-12.30 mg/kg b) 0.06-6.50 mg/kg c) 0.06-6.95 mg/kg Wet wt	a) 5.2+/-4.9 mg/kg b) 2.2+/-2.2 mg/kg c) 3.0+/-2.7 mg/kg Wet wt	a) Total n-C12-C33 b) Odd-numbered C's, 20-53% of total c) Even-numbered C's, 80-47% of total 4 mo old suckling calves. Powdered milk formula. Long-chain >C22 predominated. Italy, Rome CC; TLC; GC
4738 Kidney	Ingestion	a) 0.08-23.60 mg/kg b) 0.02-9.10 mg/kg c) 0.06-14.40 mg/kg Wet wt	a) 7.8+/-8.2 mg/kg b) 3.1+/-3.1 mg/kg c) 4.7+/-5.1 mg/kg Wet wt	a) Total n-C12-C33 b) Odd-numbered C's, 25-60% of total c) Even-numbered C's, 75-40% of total 4 mo old suckling calves. Powdered milk formula. Long-chain >C22 predominated. Italy, Rome CC; TLC; GC

(next page)

n-Alkanes (No postings in CHEMLINE).
n-C12-n-C33
Cattle
BOS sp.

(continued)

Tissue	Cases Exposure Route	Range	Mean	General Information
4739 Liver	11 Ingestion	a) 0.60-24.70 mg/kg b) 0.13-13.59 mg/kg c) 0.28-11.10 mg/kg Wet wt	a) 7.5+/-7.6 mg/kg b) 3.5+/-4.2 mg/kg c) 4.0+/-3.5 mg/kg Wet wt	a) Total n-C12-C33 b) Odd-numbered C's, 19-55% of total c) Even-numbered C's, 81-45% of total 4 mo old suckling calves. Powdered milk formula. Long-chain >C22 predominated. Italy, Rome CC; TLC; GC
4740 Muscle	11 Ingestion	a) 0.53-14.00 mg/kg b) 0.17-7.11 mg/kg c) 0.35-7.13 mg/kg Wet wt	a) 6.0+/-5.6 mg/kg b) 2.6+/-2.8 mg/kg c) 3.8+/-2.8 mg/kg Wet wt	a) Total n-C12-C33 b) Odd-numbered C's, 12-52% of total c) Even-numbered C's, 88-48% of total 4 mo old suckling calves. Powdered milk formula. Adults contained none odd n-C23-C33 as found in vegetable products. Italy, Rome CC; TLC; GC
4741 Spleen	11 Ingestion	a) 0.13-9.80 mg/kg b) 0.04-2.38 mg/kg c) 0.09-7.42 mg/kg Wet wt	a) 1.9+/-2.8 mg/kg b) 0.5+/-0.7 mg/kg c) 1.4+/-2.1 mg/kg Wet wt	a) Total n-C12-C33 b) Odd-numbered C's, 13-39% of total c) Even-numbered C's, 87-61% of total 4 mo old suckling calves. Powdered milk formula. Italy, Rome CC; TLC; GC

CATTLE; HYDROCARBONS; DIETS; ADIPOSE TISSUE; HEART; LIVER; KIDNEYS; SPLEEN; MUSCLES; AGE; ITALY; COMPARATIVE EVALUATIONS; DELIBERATE EXPOSURE; TERRESTRIAL; JUVENILES
DiMuccio, A.; Lintas, C.; Filos, M.; Bernardini, M.P. 1984 Ecotoxicology and Environmental Safety 8:248-253

Naphthalene
91-20-3
C10-H8
MW 128.16, MP 80.1 C, BP 217.9 C, VP 1 mm Hg at 52.6 C
Bass, black sea
CENTROPRISTIS STRIATA

Tissue	Cases Exposure Route	Range	Mean	General Information
4742 Blood	a) 9 b) 9	a) 11.5-21.8 ng/g b) 12-39 ng/g Dry wt	a) Not applicable b) Not applicable	a) 336 and 72 hr after ingesting oysters containing 40 ug/g naphthalene b) 72 and 24 hr after 47 ug/g naphthalene and 10.8 ug/g Cd Estimated from graph. Range of means. South Carolina Scintillation counting
4743 Brain	a) 9 b) 9	a) 7-11 ng/g b) 3.5-16 ng/g Dry wt	a) Not applicable b) Not applicable	a) 24 and 72 hr after ingesting oysters containing 40 ug/g naphthalene b) 24 and 336 hr after 47 ug/g naphthalene and 10.8 ug/g Cd Estimated from graph. Range of means. South Carolina Gamma counting

(next page)

Naphthalene
91-20-3
C10-H8
MW 128.16, MP 80.1 C, BP 217.9 C, VP 1 mm Hg at 52.6 C

Bass, black sea
CENTROPRISTIS STRIATA

(continued)

Tissue	Cases Exposure Route	Range	Mean	General Information
4744 Gall bladder	a) 9 b) 9	a) 23-34.8 ng/g b) 18.5-37 ng/g Dry wt	a) Not applicable b) Not applicable	a) 336 and 72 hr after ingesting oysters containing 40 ug/g naphthalene b) 336 and 72 hr after 47 ug/g naphthalene and 10.8 ug/g Cd Estimated from graph. Range of means. South Carolina Scintillation counting
4745 Gills	a) 9 b) 9	a) 5-18 ng/g b) 3.5-13 ng/g Dry wt	a) Not applicable b) Not applicable	a) 72 and 24 hr after ingesting oysters containing 40 ug/g naphthalene b) 72 and 336 hr after 47 ug/g naphthalene and 10.8 ug/g Cd Estimated from graph. Range of means. South Carolina Scintillation counting
4746 Heart	a) 9 b) 9	a) 8.5-15.5 ng/g b) 4.5-10.5 ng/g Dry wt	a) Not applicable b) Not applicable	a) 336 and 24 hr after ingesting oysters containing 40 ug/g naphthalene b) 24 and 72 hr after 47 ug/g naphthalene and 10.8 ug/g Cd Estimated from graph. Range of means. South Carolina Scintillation counting
4747 Kidney	a) 9 b) 9	a) 8-13 ng/g b) 6.5-18.5 ng/g Dry wt	a) Not applicable b) Not applicable	a) 336 and 24 hr after ingesting oysters containing 40 ug/g naphthalene b) 24 and 336 hr after 47 ug/g naphthalene and 10.8 ug/g Cd Estimated from graph. Range of means. South Carolina Scintillation counting
4748 Liver	a) 9 b) 9	a) 10.5-18 ng/g b) 7.8-12 ng/g Dry wt	a) Not applicable b) Not applicable	a) 336 and 72 hr after ingesting oysters containing 40 ug/g naphthalene b) 24 and 336 hr after 47 ug/g naphthalene and 10.8 ug/g Cd Estimated from graph. Range of means. South Carolina Scintillation counting
4749 Muscle	a) 9 b) 9	a) 7.5-21.5 ng/g b) 7.0-14.0 ng/g Dry wt	a) Not applicable b) Not applicable	a) 24 and 336 hr after ingesting oysters containing 40 ug/g naphthalene b) 72 and 336 hr after 47 ug/g naphthalene and 10.8 ug/g Cd Estimated from graph. Range of means. South Carolina Scintillation counting
4750 Skin	a) 9 b) 9	a) 3-8.5 ng/g b) 3-5 ng/g Dry wt	a) Not applicable b) Not applicable	a) 336 and 72 hr after ingesting oysters containing 40 ug/g naphthalene b) 72 and 336 hr after 47 ug/g naphthalene and 10.8 ug/g Cd Estimated from graph. Range of means. South Carolina Scintillation counting

BRAIN; GALL BLADDER; KIDNEYS; SKIN; GILLS; HEART; LIVER; MUSCLES; BLOOD; BODY; AQUATIC; FISHES; ENVIRONMENTAL EXPOSURE; DELIBERATE EXPOSURE; SOUTH CAROLINA; CADMIUM; BIOACCUMULATION; OYSTERS; WATER POLLUTION

Fair, P.A.; Sick, L.V. 1983 Archives of Environmental Contamination and Toxicology 12:551-557

Naphthalene

91-20-3
C10-H8
MW 128.16, MP 80.1 C, BP 217.9 C, VP 1 mm Hg at 52.6 C

Oyster
CRASSOSTREA VIRGINICA

Tissue	Cases Exposure Route	Range	Mean	General Information
4751 Body	a) 12 b) 12 c) 12 d) 12	a) Not given b) Not given c) Not given d) Not given	a) 0 ug/g b) 12.70 ug/g c) 0.40 ug/g d) 0.47 ug/g Wet wt	a) 4-day exposure to 100 ug/L b) Same Cd exposure plus 24 hrs to 800 ug/L naphthalene c) 80 ug/L naphthalene d) 100 ug/L Cd plus 80 ug/L naphthalene Edge of shell margin removed for constant exposure. South Carolina, Bulls Bay Scintillation counting

BRAIN; GALL BLADDER; KIDNEYS; SKIN; GILLS; HEART; LIVER; MUSCLES; BLOOD; BODY; AQUATIC; FISHES; ENVIRONMENTAL EXPOSURE; DELIBERATE EXPOSURE; SOUTH CAROLINA; CADMIUM; BIOACCUMULATION; OYSTERS; WATER POLLUTION

Fair, P.A.; Sick, L.V. 1983 Archives of Environmental Contamination and Toxicology 12:551-557

Turtle, sea
CHELONIA MYDAS

Tissue	Cases Exposure Route	Range	Mean	General Information
4752 Liver	2	Not given	0.02 ug/g	Found dead after oilspill 6/79. Evidence of prolonged exposure to external oil Wt 1,025 and 990 g Mexico, Bay of Campeche, Laguna Madre General body condition poor GC-MS

MEXICO; LIVER; TURTLES; AQUATIC; HYDROCARBONS; BIOACCUMULATION; WATER POLLUTION; ENVIRONMENTAL EXPOSURE

Hall, R.J.; Belisle, A.A.; Sileo, L. 1983 Journal of Wildlife Diseases 19(2):106-109

Naphthol (8 CI); Naphthalenol (9 CI)

1321-67-1
C10-H8-O

Sole, English
PAROPHRYS VETULUS

Tissue	Cases Exposure Route	Range	Mean	General Information
4753 Bile	1	Not applicable	410 ng/g Wet wt	C-2 isomer. Levels significantly higher than in fish from unpolluted Meadow Point area. Washington, Duwamish Waterway GC/MS

BILE; AQUATIC; FISHES; ENVIRONMENTAL EXPOSURE; WASHINGTON; LIVER DISEASES; NEOPLASMS; MEASUREMENT METHODS; BIPHENYL COMPOUNDS; POLYCYCLIC AROMATIC HYDROCARBONS; BIOACCUMULATION; METABOLITES; URBAN AREAS; WATER POLLUTION

Krahn, M.M.; Myers, M.S.; Burrows, D.G.; Malins, D.C. 1984 Xenobiotica 14:633-646

Nickel
7440-02-0
Ni
AtW 58.71, MP 1455 C, BP 2837 C, VP 10 mm Hg at 2090 C, 100 mm Hg at 2370 C

Bass, rock
AMBLOPLITES RUPESTRIS

Tissue	Cases Exposure Route	Range	Mean	General Information
4754 Body	14	1.4-6.9 ug/g Dry wt	2.4 ug/g Dry wt Median	Highway-contaminated stream. No positive correlation with total length. Sediment association influenced inter-specific variation. Virginia, Back Creek AAS

BODY; AQUATIC; VIRGINIA; CADMIUM; LEAD; NICKEL; ZINC; METALS; AIR POLLUTION; WATER POLLUTION; BIOACCUMULATION; BIOLOGICAL MONITORING; FISHES; BONES
Ney, J.J.; Van Hassel, J.H. 1983 Archives of Environmental Contamination and Toxicology 12:701-706

Beaver
CASTOR CANADENSIS

Tissue	Cases Exposure Route	Range	Mean	General Information
4755 Intestine	4 Ingestion	Not given	0.4+/-0.1 ug/g	Undisturbed watershed. Specimens from fur trapper. Canada, Ontario, Georgian Bay, Tadenac Lake ES
4756 Kidney	4 Ingestion	Not given	0.4+/-0.1 ug/g	Undisturbed watershed. Specimens from fur trapper. Canada, Ontario, Georgian Bay, Tadenac Lake ES
4757 Liver	4 Ingestion	Not given	0.5+/-0.4 ug/g	Undisturbed watershed. Specimens from fur trapper. Canada, Ontario, Georgian Bay, Tadenac Lake ES
4758 Muscle	4 Ingestion	Not given	0.9+/-0.5 ug/g	Undisturbed watershed. Specimens from fur trapper. Canada, Ontario, Georgian Bay, Tadenac Lake ES

BEAVERS; OTTERS; RACCOONS; CANADA; BIOACCUMULATION; BIOMAGNIFICATION; SELENIUM; IRON; COPPER; CADMIUM; CALCIUM; ALUMINUM; MAGNESIUM; MANGANESE; SODIUM; NICKEL; PHOSPHORUS; ZINC; POTASSIUM; DETOXIFICATION; DIETS; LIVER; KIDNEYS; INTESTINES; MUSCLES; AQUATIC; TERRESTRIAL; ENVIRONMENTAL EXPOSURE; BIOLOGICAL MONITORING
Wren, C.D. 1984 Science of the Total Environment 34:177-184

Clam
DONAX SERRA

Tissue	Cases Exposure Route	Range	Mean	General Information
4759 Body	251	0.23-0.50 ug/g Wet wt	Not applicable	Collected 8/78-8/79 for national marine pollution monitoring program. Range of means. South Africa

BODY; AQUATIC; ENVIRONMENTAL EXPOSURE; SOUTH AFRICA; METALS; ZINC; CADMIUM; COPPER; LEAD; IRON; MANGANESE; NICKEL; COBALT; CHROMIUM; BIOINDICATORS; BIOLOGICAL MONITORING; BIOACCUMULATION; WATER POLLUTION; MOLLUSKS
Watling, H.R.; Watling, R.J. 1983 Bulletin of Environmental Contamination and Toxicology 31:331-338

Nickel
7440-02-0
Ni
AtW 58.71, MP 1455 C, BP 2837 C, VP 10 mm Hg at 2090 C, 100 mm Hg at 2370 C

Dace, blacknose
RHINICTHYS ATRATULUS

Tissue	Cases Exposure Route	Range	Mean	General Information
4760 Body	19	1.9-4.0 ug/g Dry wt	3.0 ug/g Dry wt Median	Highway-contaminated stream. No positive correlation with total length. Sediment association influenced inter-specific variation. Virginia, Back Creek AAS
BODY; AQUATIC; VIRGINIA; CADMIUM; LEAD; NICKEL; ZINC; METALS; AIR POLLUTION; WATER POLLUTION; BIOACCUMULATION; BIOLOGICAL MONITORING; FISHES; BONES Ney, J.J.; Van Hassel, J.H. 1983 Archives of Environmental Contamination and Toxicology 12:701-706				

Darter, fantail
ETHEOSTOMA FLABELLARE

Tissue	Cases Exposure Route	Range	Mean	General Information
4731 Body	19	3.7-13.4 ug/g Dry wt	5.9 ug/g Dry wt Median	Highway-contaminated stream. No positive correlation with total length. Sediment association influenced inter-specific variation. Virginia, Back Creek AAS
BODY; AQUATIC; VIRGINIA; CADMIUM; LEAD; NICKEL; ZINC; METALS; AIR POLLUTION; WATER POLLUTION; BIOACCUMULATION; BIOLOGICAL MONITORING; FISHES; BONES Ney, J.J.; Van Hassel, J.H. 1983 Archives of Environmental Contamination and Toxicology 12:701-706				

Duck, long-tailed
CLANGULA HYEMALIS

Tissue	Cases Exposure Route	Range	Mean	General Information
4762 Feathers	a) 28	a) 0.19-1.0 mg/kg b) 0.50-0.84 mg/kg c) 0.16-0.26 mg/kg Dry wt	a) 0.44 +or- 0.15 mg/kg b) 0.69 +or- 0.25 mg/kg c) 0.21 +or- 0.05 mg/kg Dry wt	a) Males b) Males, oiled c) Females Collected 1980-81. Composite samples Poland, Gdansk Bay AAS
4763 Heart	a) 50 b) 40	a) Not given b) <0.009-0.036 mg/kg Wet wt	a) <0.005 mg/kg b) Not given Wet wt	a) Males b) Females Collected 1980-81 Composite samples Poland, Gdansk Bay AAS

(next page)

Nickel

7440-02-0
Ni
AtW 58.71, MP 1455 C, BP 2837 C, VP 10 mm Hg at 2090 C, 100 mm Hg at 2370 C

Duck, long-tailed
CLANGULA HYEMALIS

(continued)

Tissue	Cases Exposure Route	Range	Mean	General Information
4764 Liver	a) 50 b) 40	a) <0.005-0.036 mg/kg b) <0.005-0.047 mg/kg Wet wt	a) 0.014 +or- 0.005 mg/kg b) 0.021 +or- 0.006 mg/kg Wet wt	a) Males b) Females Collected 1980-81. Composite samples Poland, Gdansk Bay AAS
4765 Muscle	90	a) <0.004-0.008 mg/kg b) <0.004-0.027 mg/kg c) <0.009-0.055 mg/kg d) 0.019-0.064 mg/kg Wet wt	a) 0.005 +or- 0.001 mg/kg b) 0.019 +or- 0.008 mg/kg c) 0.025 +or- 0.008 mg/kg d) 0.039 +or- 0.034 mg/kg Wet wt	a) Males, breast b) Females, breast c) Males, leg d) Females, leg Collected 1980-81. Composite samples Poland, Gdansk Bay AAS
4766 Stomach	a) 50 b) 40	a) 0.052-0.074 mg/kg b) 0.055-0.059 mg/kg Wet wt	a) 0.061 +or- 0.005 mg/kg b) 0.057 +or- 0.002 mg/kg Wet wt	a) Males b) Females Collected 1980-81 Composite samples Poland, Gdansk Bay AAS

POLAND; BIRDS; IRON; ZINC; MANGANESE; COPPER; LEAD; CADMIUM; COBALT; NICKEL; BIOACCUMULATION; LIVER; MUSCLES; HEART; STOMACH; FEATHERS; AQUATIC; WATERFOWL; ENVIRONMENTAL EXPOSURE

Szefer, P.; Falandysz, J. 1983 Science of the Total Environment 29:269-276

Earthworm
PHERETIMA HILGENDORFI

Tissue	Cases Exposure Route	Range	Mean	General Information
4767 Body, whole	37	0.20-0.73 ug/wet g	0.44+/-0.15 ug/wet g	Total burden increased with increased body length up to 18 cm, thereafter it remained constant. Accumulation depended upon metabolic turnover. Japan, Matsuyama City, Tsubaki shrine AAS

IRON; MANGANESE; ZINC; COPPER; LEAD; NICKEL; COBALT; ARSENIC; MERCURY; CADMIUM; BIOACCUMULATION; SOILS; BIOINDICATORS; LAND POLLUTION; EARTHWORMS; BODY; TERRESTRIAL; ENVIRONMENTAL EXPOSURE; JAPAN; METALS; BIOLOGICAL MONITORING

Honda, K.; Nasu, T.; Tatsukawa, R. 1984 Archives of Environmental Contamination and Toxicology 13:427-432

Nickel
7440-02-0
Ni
AtW 58.71, MP 1455 C, BP 2837 C, VP 10 mm Hg at 2090 C, 100 mm Hg at 2370 C

Mollusk
PERNA PERNA

Tissue	Cases Exposure Route	Range	Mean	General Information
4768 Body	10	a) Not given b) Not given	a) 0.38 +or- 0.11 ug/g b) 0.82 +or- 0.35 ug/g Wet wt	a) Controls b) 100 ug/l for 3 wk South Africa, Knysna Heads AAS
MOLLUSKS; BIOACCUMULATION; BIOINDICATORS; WATER POLLUTION; CADMIUM; CHROMIUM; COBALT; COPPER; LEAD; NICKEL; ZINC; BODY; SOUTH AFRICA Watling, H.R. 1983 Bulletin of Environmental Contamination and Toxicology 30:317-322				

Mussel
CHOROMYTILUS MERIDIONALIS

Tissue	Cases Exposure Route	Range	Mean	General Information
4769 Body	10	a) Not given b) Not given	a) 0.09 +or- 0.06 ug/g b) 0.65 +or- 0.13 ug/g Wet wt	a) Controls b) 100 ug/l for 3 wk South Africa, Cape Town, Bloubergstrand AAS
MOLLUSKS; BIOACCUMULATION; BIOINDICATORS; WATER POLLUTION; CADMIUM; CHROMIUM; COBALT; COPPER; LEAD; NICKEL; ZINC; BODY; SOUTH AFRICA Watling, H.R. 1983 Bulletin of Environmental Contamination and Toxicology 30:317-322				

Mussels
MYTILUS EDULIS

Tissue	Cases Exposure Route	Range	Mean	General Information
4770 Body		a) Not given b) Not given	a) 10.40+/-2.66 ug/g b) 16.43+/-3.19 ug/g Dry wt	a) 5.0 ug Ni/kg b) 10.0 ug Ni/kg Treated for 12 wks and analysed for 28 wks, biweekly. Significant linear relationships between uptake and seawater levels. Significant inverse relationship between tissue levels and dry wt. Lost 73% and 80% of tissue levels in 5 and 10 ug treatments. Rhode Island, Narragansett Bay AAS
BODY; OYSTERS; MUSSELS; AQUATIC; DELIBERATE EXPOSURE; RHODE ISLAND; NICKEL; BIOACCUMULATION; BIOLOGICAL MONITORING; BIOINDICATORS; WATER POLLUTION Zaroogian, G.E.; Johnson, M. 1984 Archives of Environmental Contamination and Toxicology 13:411-418				

Nickel
7440-02-0
Ni
AtW 58.71, MP 1455 C, BP 2837 C, VP 10 mm Hg at 2090 C, 100 mm Hg at 2870 C

Otter
LUTRA CANADENSIS

Tissue	Cases Exposure Route	Range	Mean	General Information
4771 Intestine	4 Ingestion	Not given	0.4+/-0.12 ug/g	Undisturbed watershed. Specimens from fur trapper. Canada, Ontario, Georgian Bay, Tadenac Lake ES
4772 Kidney	4 Ingestion	Not given	0.7+/-0.5 ug/g	Undisturbed watershed. Specimens from fur trapper. Canada, Ontario, Georgian Bay, Tadenac Lake ES
4773 Liver	4 Ingestion	Not given	0.5+/-0.3 ug/g	Undisturbed watershed. Specimens from fur trapper. Canada, Ontario, Georgian Bay, Tadenac Lake ES
4774 Muscle	4 Ingestion	Not given	0.9+/-0.5 ug/g	Undisturbed watershed. Specimens from fur trapper. Canada, Ontario, Georgian Bay, Tadenac Lake ES

BEAVERS; OTTERS; RACCOONS; CANADA; BIOACCUMULATION; BIOMAGNIFICATION; SELENIUM; IRON; COPPER; CADMIUM; CALCIUM; ALUMINUM; MAGNESIUM; MANGANESE; SODIUM; NICKEL; PHOSPHORUS; ZINC; POTASSIUM; DETOXIFICATION; DIETS; LIVER; KIDNEYS; INTESTINES; MUSCLES; AQUATIC; TERRESTRIAL; ENVIRONMENTAL EXPOSURE; BIOLOGICAL MONITORING

Wren, C.D. 1984 Science of the Total Environment 34:177-184

Oyster
CRASSOSTREA VIRGINICA

Tissue	Cases Exposure Route	Range	Mean	General Information
4775 Body		a) Not given b) Not given	a) 9.62+/-3.56 ug/g b) 12.96+/-5.15 ug/g Dry wt	a) 5.0 ug Ni/kg b) 10.0 ug Ni/kg Treated for 12 wks and analysed for 28 wks, biweekly. Significant linear relationships between uptake and seawater levels. Significant inverse relationship between tissue levels and dry wt. Lost 48% and 68% of tissue levels in 5 and 10 ug treatments. Massachusetts, Cotuit Sound AAS

BODY; OYSTERS; MUSSELS; AQUATIC; DELIBERATE EXPOSURE; RHODE ISLAND; NICKEL; BIOACCUMULATION; BIOLOGICAL MONITORING; BIOINDICATORS; WATER POLLUTION

Zaroogian, G.E.; Johnson, M. 1984 Archives of Environmental Contamination and Toxicology 13:411-418

Nickel
7440-02-0
Ni
AtW 58.71,MP 1455 C, BP 2837 C,VP 10 mm Hg at 2090 C,100 mm Hg at 2370 C

Oyster
CRASSOSTREA VIRGINICA

Tissue	Cases Exposure Route	Range	Mean	General Information
4776 Body	10	a) Not given b) Not given	a) 0.03 +or- 0.02 ug/g b) 0.28 +or- 0.09 ug/g Wet wt	a) Controls b) 100 ug/l for 3 wk South Africa, Knysna Heads AAS
MOLLUSKS; BIOACCUMULATION; BIOINDICATORS; WATER POLLUTION; CADMIUM; CHROMIUM; COBALT; COPPER; LEAD; NICKEL; ZINC; BODY; SOUTH AFRICA				
Watling, H.R. 1983 Bulletin of Environmental Contamination and Toxicology 30:317-322				

Oyster, Pacific
CRASSOSTREA GIGAS

Tissue	Cases Exposure Route	Range	Mean	General Information
4777 Body	10	a) Not given b) Not given	a) 0.04 +or- 0.02 ug/g b) 0.47 +or- 0.24 ug/g Wet wt	a) Controls b) 100 ug/l for 3 wk South Africa, Knysna Heads AAS
MOLLUSKS; BIOACCUMULATION; BIOINDICATORS; WATER POLLUTION; CADMIUM; CHROMIUM; COBALT; COPPER; LEAD; NICKEL; ZINC; BODY; SOUTH AFRICA				
Watling, H.R. 1983 Bulletin of Environmental Contamination and Toxicology 30:317-322				

Queenfish

Tissue	Cases Exposure Route	Range	Mean	General Information
4778 Gastrointestin-al tract	1	Not applicable	3.37 ug/g Wet wt	Exposed to tar flakes from damaged Iranian oil wells. Releases (since 2/83) of 4000 bbl/d of crude oil with high levels of Ni and V caused kills. Specimens collected 4/83. Saudi Arabia, Arabian Gulf; Iran, Nowruz oil field AAS
4779 Liver	1	Not applicable	0.69 ug/g Wet wt	Exposed to tar flakes from damaged Iranian oil wells. Releases (since 2/83) of 4000 bbl/d of crude oil with high levels of Ni and V caused kills. Specimens collected 4/83. Saudi Arabia, Arabian Gulf; Iran, Nowruz oil field AAS

(next page)

Nickel
7440-02-0
Ni
AtW 58.71,MP 1455 C, BP 2837 C,VP 10 mm Hg at 2090 C,100 mm Hg at 2370 C

Queenfish

(continued)

Tissue	Cases Exposure Route	Range	Mean	General Information
4780 Muscle	1	Not applicable	1.70 ug/g Wet wt	Exposed to tar flakes from damaged Iranian oil wells. Releases (since 2/83) of 4000 bbl/d of crude oil with high levels of Ni and V caused kills. Specimens collected 4/83. Saudi Arabia, Arabian Gulf; Iran, Nowruz oil field AAS

MUSCLES; LIVER; TURTLES; SNAKES; AQUATIC; ENVIRONMENTAL EXPOSURE; SAUDI ARABIA; NICKEL; VANADIUM; ANIMAL POPULATIONS; BIOACCUMULATION; FISHES; FOOD CONTAMINATION; WATER POLLUTION; GASTROINTESTINAL SYSTEM

Sadiq, M.; Zaidi, T.H. 1984 Bulletin of Environmental Contamination and Toxicology 32:635-639

Raccoon
PROCYON LOTOR

Tissue	Cases Exposure Route	Range	Mean	General Information
4781 Kidney	4 Ingestion	Not given	0.7+/-0.3 ug/g	Undisturbed watershed. Specimens from fur trapper. Canada, Ontario, Georgian Bay, Tadenac Lake ES
4782 Muscle	4 Ingestion	Not given	1.0+/-1.2 ug/g	Undisturbed watershed. Specimens from fur trapper. Canada, Ontario, Georgian Bay, Tadenac Lake ES

BEAVERS; OTTERS; RACCOONS; CANADA; BIOACCUMULATION; BIOMAGNIFICATION; SELENIUM; IRON; COPPER; CADMIUM; CALCIUM; ALUMINUM; MAGNESIUM; MANGANESE; SODIUM; NICKEL; PHOSPHORUS; ZINC; POTASSIUM; DETOXIFICATION; DIETS; LIVER; KIDNEYS; INTESTINES; MUSCLES; AQUATIC; TERRESTRIAL; ENVIRONMENTAL EXPOSURE; BIOLOGICAL MONITORING

Wren, C.D. 1984 Science of the Total Environment 34:177-184

Nickel
7440-02-0
Ni
AtW 58.71, MP 1455 C, BP 2837 C, VP 10 mm Hg at 2090 C, 100 mm Hg at 2370 C
Roach
RUTILUS RUTILUS L.

Tissue	Cases Exposure Route	Range	Mean	General Information
4783 Gills	Ingestion Inhalation	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given g) Not given h) Not given	a) 4.8+/-0.5 ug/g b) 35.3+/-4.3 ng/g c) 51.3+/-28.1 ug/g d) 126.6+/-29.5 ug/g e) 83.5+/-7.7 ug/g f) 3.7+/-3.0 ug/g g) 70.1+/-18.9 ug/g h) 84.4+/-7.6 ug/g	a) Control from water storage reservoir b) 50 mg/l, survived 24 hr experiment c) 100 mg/l, died during 24 hr d) 100 mg/l, Meuse River water, mortality within 8 hrs e) 100 mg/l, acidified water (pH 6.5), mortality within 6 hrs f) Control from Meuse river g) 100 mg Ni/l+1.0 mg Cu/l, mortality within 4 hrs h) 100 mg Ni/l+80 mg Cr/l, mortality within 4 hrs Fish 10-15 cm long. Low pH increased mortality and uptake, as did Cu, Cr. g), h) significantly higher levels than c). Belgium, Antwerp, Meuse River AAS
4784 Kidney	Ingestion Inhalation	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given g) Not given h) Not given	a) 29.7+/-10.5 ug/g b) 26.0+/-7.0 ug/g c) 41.5+/-30.4 ug/g d) 39.5+/-9.5 ug/g e) 25.7+/-8.1 ug/g f) 2.7+/-1.3 ug/g g) 29.9+/-9.9 ug/g h) 21.8+/-4.3 ug/g	a) Control from water storage reservoir b) 50 mg Ni/l, survived 24 hr experiment c) 100 mg Ni/l, died during 24 hr period d) 100 mg Ni/l, Meuse River water, mortality within 8 hrs e) 100 mg Ni/l, acidified water (pH 6.5), mortality within 6 hrs f) Control from Meuse River g) 100 mg Ni/l+1.0 mg Cu/l, mortality within 4 hrs h) 100 mg Ni/l+80 mg Cr/l, mortality within 4 hrs Fish 10-15 cm long. Low pH increased mortality, as did Cu and Cr. Belgium, Meuse River, Antwerp AAS
4785 Liver	Ingestion Inhalation	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given g) Not given h) Not given	a) 5.9+/-3.0 ug/g b) 13.5+/-2.9 ug/g c) 15.5+/-4.3 ug/g d) 19.5+/-7.0 ug/g e) 11.4+/-3.9 ug/g f) 1.7+/-0.9 ug/g g) 17.3+/-2.8 ug/g h) 19.2+/-12.8 ug/g	a) Control from water storage reservoir b) 50 mg Ni/l, survived 24 hr experiment c) 100 mg Ni/l, died during 24 hr period d) 100 mg Ni/l, Meuse River water, mortality within 8 hrs e) 100 mg Ni/l, acidified water (pH 6.5), mortality within 6 hrs f) Control from Meuse River g) 100 mg Ni/l+1.0 mg Cu/l, mortality within 4 hrs h) 100 mg Ni/l+80 mg Cr/l, mortality within 4 hrs Fish 10-15 cm long. Low pH increased mortality, as did Cu and Cr. Belgium, Meuse River, Antwerp AAS

(next page)

Nickel
7440-02-0
Ni
AtW 58.71, MP 1455 C, BP 2837 C, VP 10 mm Hg at 2090 C, 100 mm Hg at 2370 C

Roach
RUTILUS RUTILUS L.

(continued)

Tissue	Cases Exposure Route	Range	Mean	General Information
4786 Muscle	Ingestion Inhalation	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given g) Not given h) Not given	a) 0.7+/-0.6 ug/g b) 3.7+/-1.1 ug/g c) 6.3+/-2.2 ug/g d) 6.9+/-1.6 ug/g e) 3.7+/-0.8 ug/g f) 0.9+/-0.8 ug/g g) 5.8+/-2.8 ug/g h) 4.0+/-2.3 ug/g	a) Control from water storage reservoir b) 50 mg Ni/l, survived 24 hr experiment c) 100 mg Ni/l, died during 24 hr period d) 100 mg Ni/l, Meuse river water, mortality within 8 hrs e) 100 mg Ni/l, acidified water (pH 6.5), mortality within 6 hrs f) Control from Meuse River g) 100 mg Ni/l+1.0 mg Cu/l, mortality within 4 hrs h) 100 mg Ni/l+80 mg Cr/l, mortality within 4 hrs Fish 10-15 cm long. Low pH increased mortality, as did Cu and Cr. Belgium, Meuse River, Antwerp AAS
4787 Opercle	Ingestion Inhalation	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given g) Not given h) Not given	a) 12.6+/-11.6 ug/g b) 26.9+/-5.9 ug/g c) 41.5+/-17.9 ug/g d) 104.7+/-43.1 ug/g e) 51.0+/-17.2 ug/g f) 4.3+/-1.8 ug/g g) 126.4+/-18.6 ug/g h) 86.0+/-15.2 ug/g	a) Control from water storage reservoir b) 50 mg/l, survived 24 hr experiment c) 100 mg/l, died during 24 hr d) 100 mg/l, Meuse River water, mortality within 8 hrs e) 100 mg/l, acidified water (pH 6.5), mortality within 6 hrs f) Control from Meuse River g) 100 mg Ni/l+1.0 mg Cu/l, mortality within 4 hrs h) 100 mg Ni/l+80 mg Cr/l, mortality within 4 hrs Fish 10-15 cm long. Low pH increased mortality and uptake, as did Cu, Cr. g), h) significantly higher levels than c). Belgium, Antwerp, Meuse River AAS
FISHES; BELGIUM; NICKEL; COPPER; CHROMIUM; BIOACCUMULATION; MUSCLES; LIVER; GILLS; KIDNEYS; AQUATIC; ENVIRONMENTAL EXPOSURE; DELIBERATE EXPOSURE; WATER POLLUTION Van Hoof, F.; Nauwelaers, J.P. 1984 Chemosphere 13(9):1053-1058				

Sheep
OVIS sp.

Tissue	Cases Exposure Route	Range	Mean	General Information
4788 Bone	a) 8 b) 8 c) 8 Ingestion	a) Not given b) Not given c) Not given	a) 3.69 ug/g b) 3.70 ug/g c) 3.52 ug/g Dry wt +/-0.18 S.E.	Lambs from ewes on basal diet fortified with cottonseed meal b) Lambs from ewes on basal diet plus 7% undigested sewage solids c) Lambs from ewes on basal diet. New Mexico AAS
4789 Kidney	a) 8 b) 8 c) 8 Ingestion	a) Not given b) Not given c) Not given	a) 0.30 ug/g b) 0.30 ug/g c) 0.30 ug/g Dry wt	a) Lambs from ewes on basal diet fortified with cottonseed meal b) Lambs from ewes on basal diet plus 7% undigested sewage solids c) Lambs from ewes on basal diet. New Mexico AAS

(next page)

Nickel
7440-02-0
Ni
AtW 58.71, MP 1455 C, BP 2837 C, VP 10 mm Hg at 2090 C, 100 mm Hg at 2370 C

Sheep
OVIS sp.

(continued)

Tissue	Cases Exposure Route	Range	Mean	General Information
4790 Liver	a) 8 b) 8 c) 8 Ingestion	a) Not given b) Not given c) Not given	a) 0.25 ug/g b) 0.25 ug/g c) 0.25 ug/g Dry wt	a) Lambs from ewes on basal diet fortified with cottonseed meal b) Lambs from ewes on basal diet plus 7 % undigested sewage solids c) Lambs from ewes on basal diet. New Mexico AAS

KIDNEYS; LIVER; BONES; SHEEP; TERRESTRIAL; ENVIRONMENTAL EXPOSURE; DELIBERATE EXPOSURE; NEW MEXICO; CADMIUM; CHROMIUM; COPPER; IRON; MERCURY; NICKEL; LEAD; ZINC; METALS; ANIMAL FEEDS; AGRICULTURE; BIOACCUMULATION; BIOLOGICAL MONITORING; FARMS; FOOD CONTAMINATION; LAND POLLUTION; SEWAGE; CALCIUM; BLOOD SERUM; MAGNESIUM; POTASSIUM; PHOSPHORUS; SODIUM

Hudgens, R.E.; Hallford, D.M. 1984 Nutrition Reports International 29(1):11-21

Snail
BULLIA RHODOSTOMA

Tissue	Cases Exposure Route	Range	Mean	General Information
4791 Body	757	0.10-0.33 ug/g Wet wt	Not applicable	Collected 8/78-8/79 for national marine pollution monitoring program. Range of means. South Africa

BODY; AQUATIC; ENVIRONMENTAL EXPOSURE; SOUTH AFRICA; METALS; ZINC; CADMIUM; COPPER; LEAD; IRON; MANGANESE; NICKEL; COBALT; CHROMIUM; BIOINDICATORS; BIOLOGICAL MONITORING; BIOACCUMULATION; WATER POLLUTION; MOLLUSKS

Watling, H.R.; Watling, R.J. 1983 Bulletin of Environmental Contamination and Toxicology 31:331-338

Snakes, sea

Tissue	Cases Exposure Route	Range	Mean	General Information
4792 Liver	7	1.87-4.73 ug/g Wet wt	1.82+/-0.89 ug/g Wet wt	Exposed to tar flakes from damaged Iranian oil wells. Releases (since 2/83) of 4000 bbl/d of crude oil with high levels of Ni and V caused kills. Specimens collected 4/83. Saudi Arabia, Arabian Gulf; Iran, Nowruz oil field AAS
4793 Muscle	7	1.70-5.38 ug/g Wet wt	3.20+/-1.30 ug/g Wet wt	Exposed to tar flakes from damaged Iranian oil wells. Releases (since 2/83) of 4000 bbl/d of crude oil with high levels of Ni and V caused kills. Specimens collected 4/83. Saudi Arabia, Arabian Gulf; Iran, Nowruz oil field AAS

MUSCLES; LIVER; TURTLES; SNAKES; AQUATIC; ENVIRONMENTAL EXPOSURE; SAUDI ARABIA; NICKEL; VANADIUM; ANIMAL POPULATIONS; BIOACCUMULATION; FISHES; FOOD CONTAMINATION; WATER POLLUTION; GASTROINTESTINAL SYSTEM

Sadiq, M.; Zaidi, T.H. 1984 Bulletin of Environmental Contamination and Toxicology 32:635-639

Nickel
7440-02-0
Ni
AtW 58.71, MP 1455 C, BP 2837 C, VP 10 mm Hg at 2090 C, 100 mm Hg at 2370 C

Sucker, northern hog
HYPENTELIUM NIGRICANS

Tissue	Cases Exposure Route	Range	Mean	General Information
4794 Body	12	2.1-4.9 ug/g Dry wt	2.8 ug/g Dry wt Median	Highway-contaminated stream. No positive correlation with total length. Sediment association influenced inter-specific variation. Virginia, Back Creek AAS
BODY; AQUATIC; VIRGINIA; CADMIUM; LEAD; NICKEL; ZINC; METALS; AIR POLLUTION; WATER POLLUTION; BIOACCUMULATION; BIOLOGICAL MONITORING; FISHES; BONES				
Ney, J.J.; Van Hassel, J.H. 1983 Archives of Environmental Contamination and Toxicology 12:701-706				

Sucker, white
CATOSTOMUS COMMERSONI

Tissue	Cases Exposure Route	Range	Mean	General Information
4795 Body	36	2.1-13.5 ug/g Dry wt	2.8 ug/g Dry wt Median	Highway-contaminated stream. No positive correlation with total length. Sediment association influenced inter-specific variation. Virginia, Back Creek AAS
4796 Bone		a) Not given b) Not given c) Not given d) Not given	a) 6.2 ug/g b) 7 ug/g c) 7 ug/g d) 7.8 ug/g	a) Age 2 years b) 3 years c) 4 years d) 5 years Highway-contaminated streams. Significant positive correlations with age. Estimated with graph. Virginia, Back Creek AAS
BODY; AQUATIC; VIRGINIA; CADMIUM; LEAD; NICKEL; ZINC; METALS; AIR POLLUTION; WATER POLLUTION; BIOACCUMULATION; BIOLOGICAL MONITORING; FISHES; BONES				
Ney, J.J.; Van Hassel, J.H. 1983 Archives of Environmental Contamination and Toxicology 12:701-706				

Sunfish, redbreast
LEPOMIS AURIFUS

Tissue	Cases Exposure Route	Range	Mean	General Information
4797 Body	30	0.3-26.3 ug/g Dry wt	2.5 ug/g Dry wt Median	Highway-contaminated stream. No positive correlation with total length. Sediment association influenced inter-specific variation. Virginia, Back Creek AAS
BODY; AQUATIC; VIRGINIA; CADMIUM; LEAD; NICKEL; ZINC; METALS; AIR POLLUTION; WATER POLLUTION; BIOACCUMULATION; BIOLOGICAL MONITORING; FISHES; BONES				
Ney, J.J.; Van Hassel, J.H. 1983 Archives of Environmental Contamination and Toxicology 12:701-706				

Nickel
7440-02-0
Ni
AtW 58.71, MP 1455 C, BP 2837 C, VP 10 mm Hg at 2090 C, 100 mm Hg at 2370 C

Turtle, hawksbill

Tissue	Cases Exposure Route	Range	Mean	General Information
4798 Liver	1	Not applicable	4.93 ug/g Wet wt	Exposed to tar flakes from damaged Iranian oil wells. Releases (since 2/83) of 4000 bbl/d of crude oil with high levels of Ni and V caused kills. Specimens collected 4/83. Saudi Arabia, Arabian Gulf; Iran, Nowruz oil field AAS
4799 Muscle	1	Not applicable	2.59 ug/g Wet wt	Exposed to tar flakes from damaged Iranian oil wells. Releases (since 2/83) of 4000 bbl/d of crude oil with high levels of Ni and V caused kills. Specimens collected 4/83. Saudi Arabia, Arabian Gulf; Iran, Nowruz oil field AAS
MUSCLES; LIVER; TURTLES; SNAKES; AQUATIC; ENVIRONMENTAL EXPOSURE; SAUDI ARABIA; NICKEL; VANADIUM; ANIMAL POPULATIONS; BIOACCUMULATION; FISHES; FOOD CONTAMINATION; WATER POLLUTION; GASTROINTESTINAL SYSTEM Sadiq, M.; Zaidi, T.H. 1984 Bulletin of Environmental Contamination and Toxicology 32:635-639				

Nitrite
14797-65-0
N-O2
MW 30.00
Cattle
BOS sp.

Tissue	Cases Exposure Route	Range	Mean	General Information
4800 Blood, plasma	5 Ingestion	a) 5-10 nmol/ml b) 5-10 nmol/ml c) 8-14 nmol/ml	a) Not applicable b) Not applicable c) Not applicable	a) 15-240 min, peak (20 nmol/ml) 60 min after dose, 3 cases b) 15-240 min, disconnected cannulae, peak (16 nmol/l) 120 min after dose, 2 cases c) 15-240 min, connected cannulae, peak (25 nmol/l) 60 min after dose, 2 cases Dose was timber milkvetch powder equivalent to 20 mg 3-nitropropanol/kg intraruminal. Disconnected cannulae prevented passage of digesta from abomasum to duodenum. Estimated from graph. Canada HPLC
BLOOD PLASMA; CATTLE; TERRESTRIAL; DELIBERATE EXPOSURE; CANADA; SURGERY; ACCIDENTAL POISONING; BIOACCUMULATION; FOOD CONTAMINATION; ANIMAL FEEDS; FARMS; VEGETATION Majak, W.; Pass, M.A.; Muir, A.D.; Rode, L.M. 1984 Toxicology Letters 23:9-15				

Nitrogen
7727-37-9
N
AtW 14.0067, MP -210.01 C, BP -195.79 C, VP 34 atm at -146.9 C
Sheep
OVIS sp.

Tissue	Cases Exposure Route	Range	Mean	General Information
4801 Blood, plasma	8 Ingestion	a) Not given b) Not given c) Not given d) Not given	a) 10.62 mg/100 ml b) 10.23 mg/100 ml c) 8.86 mg/100 ml d) 7.85 mg/100 ml	a) Controls 0 g b) Controls 3 g c) 3 g protected d) 6 g protected Mean urea nitrogen of 2, 4, 6 hr measurements after diet containing methionine in unprotected form or protected by imbedding in lipid/protein matrix. Kentucky Colorimetry
4802 Urine	8 Ingestion	a) Not given b) Not given c) Not given d) Not given	a) 6.79 g/d b) 6.42 g/d c) 5.87 g/d d) 5.98 g/d	a) Controls 0 g b) Controls, 3 g c) 3 g protected d) 6 g protected After diet containing unprotected methionine or protected by lipid/protein matrix, allowing better absorption. Kentucky Kjeldahl

BLOOD PLASMA; URINE; SHEEP; TERRESTRIAL; KENTUCKY; DELIBERATE EXPOSURE; JUVENILES; NUTRITIONAL DEFICIENCIES; AMINO ACIDS; NITROGEN; LIPIDS; BIOACCUMULATION; FOOD ADDITIVES; ANIMAL FEEDS; METABOLISM
Smith, S.I.; Boling, J.A. 1984 Journal of Animal Science 58(1):187-193

Nonadecane
629-92-5
C19-H40
MW 268.53, MP 32.1 C, BP 329.7 C, VP 1 mm Hg at 133.2 C
Turtle, sea
CHELONIA MYDAS

Tissue	Cases Exposure Route	Range	Mean	General Information
4803 Liver	2	Not given	0.02 ug/g	Found dead after oilspill 6/79. Evidence of prolonged exposure to external oil Wt 1,025 and 990 g Mexico, Bay of Campeche, Laguna Madre General body condition poor GC-MS

MEXICO; LIVER; TURTLES; AQUATIC; HYDROCARBONS; BIOACCUMULATION; WATER POLLUTION; ENVIRONMENTAL EXPOSURE
Hall, R.J.; Belisle, A.A.; Sileo, L. 1983 Journal of Wildlife Diseases 19(2):106-109

Octadecane
593-45-3
C18-H38
MW 254.51, BP 316.1 C, VP 1 mm Hg at 119.6 C

Turtle, sea
CHELONIA MYDAS

Tissue	Cases Exposure Route	Range	Mean	General Information
4804 Liver	2	Not given	0.05 ug/g	Found dead after oilspill 6/79. Evidence of prolonged exposure to external oil Wt 1,025 and 990 g Mexico, Bay of Campeche, Laguna Madre General body condition poor GC-MS
MEXICO; LIVER; TURTLES; AQUATIC; HYDROCARBONS; BIOACCUMULATION; WATER POLLUTION; ENVIRONMENTAL EXPOSURE Hall, R.J.; Belisle, A.A.; Sileo, L. 1983 Journal of Wildlife Diseases 19(2):106-109				

Organosiloxanes (No postings in CHEMLINE).

Barbel, steed
HEMIBARBUS LABEO

Tissue	Cases Exposure Route	Range	Mean	General Information
4805 Muscle	6 Ingestion Inhalation	0.28-0.59 ug/g	0.40 ug/g	Below Kuwabara river inflow, Tokaiohashi Station. 2 ug/l in Kuwabara River. Japan, Nagara River watershed Plasma ES
FISHES; MUSCLES; JAPAN; AQUATIC; SILICONES; BIOLOGICAL MONITORING; WATER POLLUTION; INDUSTRIAL POLLUTION; BIOCONCENTRATION; ENVIRONMENTAL EXPOSURE Watanabe, N.; Nakamura, T.; Watanabe, E.; Sato, E.; Ose, Y. 1984 Science of the Total Environment 35:91-97				

Carp, deepbodied crucian
CARASSIUS CUVIERI

Tissue	Cases Exposure Route	Range	Mean	General Information
4806 Muscle	a) 6 b) 6 Ingestion Inhalation	a) 0.20-4.47 ug/g b) 0.20-0.85 ug/g	a) 0.69 ug/g b) 0.36 ug/g	a) Junction of Sakai and Nagara Rivers, area receiving sewage, paper mill wastes b) Below Kuwabara River inflow, Tokarohashi, area with 2 ug/l in Kuwabara River Watershed also receives effluents from dye factories. Japan, Nagara River watershed Plasma ES
FISHES; MUSCLES; JAPAN; AQUATIC; SILICONES; BIOLOGICAL MONITORING; WATER POLLUTION; INDUSTRIAL POLLUTION; BIOCONCENTRATION; ENVIRONMENTAL EXPOSURE Watanabe, N.; Nakamura, T.; Watanabe, E.; Sato, E.; Ose, Y. 1984 Science of the Total Environment 35:91-97				

Organosiloxanes (No postings in CHEMLINE).

Dace, Japanese
LEUCISCUS HAKONENSIS

Tissue	Cases Exposure Route	Range	Mean	General Information
4807 Muscle	4 Ingestion Inhalation	0.81-0.98 ug/g	0.89 ug/g	Below Kuwabara river inflow, Tokaiohashi Station. 2 ug/l in Kuwabara River. Japan, Nagara River watershed Plasma ES
FISHES; MUSCLES; JAPAN; AQUATIC; SILICONES; BIOLOGICAL MONITORING; WATER POLLUTION; INDUSTRIAL POLLUTION; BIOCONCENTRATION; ENVIRONMENTAL EXPOSURE Watanabe, N.; Nakamura, T.; Watanabe, E.; Sato, E.; Ose, Y. 1984 Science of the Total Environment 35:91-97				

Pentadecane
629-62-9
C15-H32
MW 212.42, MP 10 C, BP 270.63 C, VP 1 mm Hg at 91.6 C

Turtle, sea
CHELONIA MYDAS

Tissue	Cases Exposure Route	Range	Mean	General Information
4808 Liver	2	Not given	0.05 ug/g	Found dead after oilspill 6/79. Evidence of prolonged exposure to external oil Wt 1,025 and 990 g Mexico, Bay of Campeche, Laguna Madre General body condition poor GC-MS
MEXICO; LIVER; TURTLES; AQUATIC; HYDROCARBONS; BIOACCUMULATION; WATER POLLUTION; ENVIRONMENTAL EXPOSURE Hall, R.J.; Belisle, A.A.; Sileo, L. 1983 Journal of Wildlife Diseases 19(2):106-109				

Pentadecane, 2,6,10,14-tetramethyl-
1921-70-6
C19-H40
MW 268.51, BP 296 C

Turtle, sea
CHELONIA MYDAS

Tissue	Cases Exposure Route	Range	Mean	General Information
4809 Liver	2	Not given	0.08 ug/g	Found dead after oilspill 6/79. Evidence of prolonged exposure to external oil Wt 1,025 and 990 g Mexico, Bay of Campeche, Laguna Madre General body condition poor GC-MS
MEXICO; LIVER; TURTLES; AQUATIC; HYDROCARBONS; BIOACCUMULATION; WATER POLLUTION; ENVIRONMENTAL EXPOSURE Hall, R.J.; Belisle, A.A.; Sileo, L. 1983 Journal of Wildlife Diseases 19(2):106-109				

Phenanthrene
85-01-8
C14-H10
MW 178.22, MP 100 C, BP 340 C, VP 1 mm Hg at 118.3 C

Turkey wing
ARCA ZEBRA

Tissue	Cases Exposure Route	Range	Mean	General Information
4810 Blood	a) 5 b) 4 c) 5 d) 5 e) 5	a) Not given b) Not given c) Not given d) Not given e) Not given	a) 1.9+or-0.2X10(E-3) b) 2.3+or-0.5X10(E-3) c) 1.6+or-0.5X10(E-3) d) 0.6+or-0.5X10(E-3) e) 0.2+or-0.05X10(E-3) dpm/g	a) 0 days b) 1 day c) 2 days d) 14 days e) 28 days Times after 24-hr exposure to 9 ug/l /9-C14/phenanthrene in seawater. Mean wt (meat and blood) 21.2 +or- 5.3 g Bermuda, Harrington Sound Radiometry
4811 Gills	a) 5 b) 4 c) 5 d) 5 e) 5	a) Not given b) Not given c) Not given d) Not given e) Not given	a) 8.2+or-1.5X10(E-3) b) 8.5+or-0.5X10(E-3) c) 3.7+or-0.4X10(E-3) d) 1.1+or-0.3X10(E-3) e) 0.7+or-0.2X10(E-3) dpm/g	a) 0 days b) 1 day c) 2 days d) 14 days e) 28 days Times after 24-hr exposure to 9 ug/l /9-C14/phenanthrene in seawater. Mean wt (meat and blood) 21.2 +or- 5.3 g Bermuda, Harrington Sound Radiometry
4812 Hepatopancreas	a) 5 b) 5 c) 5 d) 5 e) 5	a) Not given b) Not given c) Not given d) Not given e) Not given	a) 19.7+or-1.8X10(E-3) b) 17.3+or-2.9X10(E-3) c) 14.8+or-3.8X10(E-3) d) 2.9+or-0.9X10(E-3) e) 2.3+or-0.5X10(E-3) dpm/g	a) 0 days b) 1 day c) 2 days d) 14 days e) 28 days Times after 24-hr exposure to 9 ug/l /9-C14/phenanthrene in seawater. Mean wt (meat and blood) 21.2 +or- 5.3 g Bermuda, Harrington Sound Radiometry
4813 Muscle	a) 5 b) 5 c) 5 d) 5 e) 5	a) Not given b) Not given c) Not given d) Not given e) Not given	a) 5.8+or-0.7X10(E-3) b) 3.1+or-0.4X10(E-3) c) 4.0+or-1.3X10(E-3) d) 0.8+or-0.2X10(E-3) e) 0.24+or-0.8X10(E-3) dpm/g	a) 0 days b) 1 day c) 2 days d) 14 days e) 28 days Times after 24-hr exposure to 9 ug/l /9-C14/phenanthrene in seawater. Mean wt (meat and blood) 21.2 +or- 5.3 g Bermuda, Harrington Sound Radiometry

BERMUDA; GILLS; HEPATOPANCREAS; MOLLUSKS; POLYCYCLIC AROMATIC HYDROCARBONS; BIOACCUMULATION; METABOLISM; WATER POLLUTION; BLOOD; MUSCLES

Solbakken, J.E.; Knap, A.H.; Searle, C.E.; Palmork, K.H. 1983 Bulletin of Environmental Contamination and Toxicology 30:420-428

Phenanthrenecarboxaldehyde (No postings in CHEMLINE).

Sole, English
PAROPHRYS VETULUS

Tissue	Cases Exposure Route	Range	Mean	General Information
4814 Bile	1	Not applicable	560 ng/g Wet wt	Levels significantly higher than in fish from unpolluted Meadow Point area. Washington, Duwamish Waterway GC/MS

BILE; AQUATIC; FISHES; ENVIRONMENTAL EXPOSURE; WASHINGTON; LIVER DISEASES; NEOPLASMS; MEASUREMENT METHODS; BIPHENYL COMPOUNDS; POLYCYCLIC AROMATIC HYDROCARBONS; BIOACCUMULATION; METABOLITES; URBAN AREAS; WATER POLLUTION

Krahn, M.M.; Myers, M.S.; Burrows, D.G.; Malins, D.C. 1984 Xenobiotica 14:633-646

Phenanthrenol

30774-85-9
C14-H10-O
Sole, English
PAROPHRYS VETULUS

Tissue	Cases Exposure Route	Range	Mean	General Information
4815 Bile	a) 4 b) 2	a) 2100-19,000 ng/g b) 5100-5800 ng/g Wet wt	a) 9800 ng/g b) 5450 ng/g Wet wt	Levels in a) significantly higher than in b). a) Washington, Duwamish Waterway; b) Washington, Washington Ship Canal GC/MS

BILE; AQUATIC; FISHES; ENVIRONMENTAL EXPOSURE; WASHINGTON; LIVER DISEASES; NEOPLASMS; MEASUREMENT METHODS; BIPHENYL COMPOUNDS; POLYCYCLIC AROMATIC HYDROCARBONS; BIOACCUMULATION; METABOLITES; URBAN AREAS; WATER POLLUTION

Krahn, M.M.; Myers, M.S.; Burrows, D.G.; Malins, D.C. 1984 Xenobiotica 14:633-646

Phenol

108-95-2
C6-H6-O
MW 94.11, MP 40.85 C, BP 182 C, VP 1 mm Hg at 40.1 C
Goldenorfe ide
LEUCISCUS IDUS MELANOTUS

Tissue	Cases Exposure Route	Range	Mean	General Information
4816 Body	Ingestion	a) Not given b) Not given c) Not given d) Not given	a) 74.80% b) 4.2% c) 15.12% d) 7.6%	a) Parent b) Glucuronide metabolite c) Sulphate metabolite d) Quinol sulphate metabolite % excreted after exposure to 0.2 mg/l. Germany Scintillation counting; HPLC

BODY; DELIBERATE EXPOSURE; FISHES; GERMANY; PHENOLS; DIETS; ANIMAL FEEDS; BIOACCUMULATION; RADIONUCLIDES; METABOLISM; METABOLITES; AQUATIC

Nagel, R. 1983 Xenobiotica 13(2):101-106

Phenol

108-95-2
C6-H6-O
MW 94.11, MP 40.85 C, BP 182 C, VP 1 mm Hg at 40.1 C

Goldfish
CARASSIUS sp.

Tissue	Cases Exposure Route	Range	Mean	General Information
4817 Body	Ingestion Injection	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given	a) 67.73% b) 79.83% c) 82.86% d) 84.88% e) 82.86% f) 57.61%	a) 0.2 mg/l in medium b) 2 mg/l in medium c) 20 mg/l in medium d) 10 mg/kg IP e) 10 mg/kg in medium f) 10 mg/kg, dietary Doses and routes. % radioactivity as parent compound. Conjugated metabolites were glucuronide, sulphate, and quinol sulphate. Metabolite ratios changed with dose and/or route. Germany Scintillation counting; HPLC
BODY; DELIBERATE EXPOSURE; FISHES; GERMANY; PHENOLS; DIETS; ANIMAL FEEDS; BIOACCUMULATION; RADIONUCLIDES; METABOLISM; METABOLITES; AQUATIC Nagel, R. 1983 Xenobiotica 13(2):101-106				

Trout, rainbow
SALMO GAIRDNERI

Tissue	Cases Exposure Route	Range	Mean	General Information
4818 Body	Ingestion	a) Not given b) Not given c) Not given d) Not given	a) 61.65% b) 20.19% c) 17.15% d) 2.1%	a) Parent b) Glucuronide metabolite c) Sulphate metabolite d) Quinol sulphate metabolite % excreted after exposure to 0.2 mg/l. Germany Scintillation counting; HPLC
BODY; DELIBERATE EXPOSURE; FISHES; GERMANY; PHENOLS; DIETS; ANIMAL FEEDS; BIOACCUMULATION; RADIONUCLIDES; METABOLISM; METABOLITES; AQUATIC Nagel, R. 1983 Xenobiotica 13(2):101-106				

Phenol, pentachloro-
87-86-5
C6-H-Cl5-O
MW 266.35, MP 190-191 C, BP 309-310 C (decomp), VP 40 mm Hg at 211.2 C

Cattle
BOS sp.

Tissue	Cases Exposure Route	Range	Mean	General Information
4819 Blood, plasma	6 Ingestion Inhalation Dermal	a) 16-18 ug/L b) 441-1086 ug/L c) 30-179 ug/L d) 24-46 ug/L e) 18-67 ug/L f) 706-1440 ug/L g) 5336-9555 ug/L h) 657-4132 ug/L S.E.	a) Not applicable b) Not applicable c) Not applicable d) Not applicable e) Not applicable f) Not applicable g) Not applicable h) Not applicable	a) Pre-exposure b) Fed from treated trough, days 1-23, peak day 10 c) Days 24-50, low on day 50 d) Inhalation from treated wood, days 51-74 e) Days 75-115, peak day 81 f) 0.05 mg/kg/d, oral, days 116-133, peak day 129 g) 0.5 mg/kg/d, oral, days 134-149, peak day 149 h) Days 150-161, after both oral doses, low on day 161 Samples 2X/wk, 238+/-11.5 kg Hereford steers with no known exposure. Highest levels from feeding, lowest from inhalation. Ranges of means. Missouri, Columbia GC
CATTLE; PENTACHLOROPHENOL; BLOOD PLASMA; INGESTION; BIOACCUMULATION; DETOXIFICATION; INHALATION; TERRESTRIAL; DELIBERATE EXPOSURE				
Osweiler, G.D.; Olesen, B.; Rottinghaus, G.E. 1984 American Journal of Veterinary Research 45(2):244-246				

Chicken
GALLUS GALLUS

Tissue	Cases Exposure Route	Range	Mean	General Information
4820 Adipose	723 Inhalation Ingestion Dermal	0.002-0.128 mg/kg	0.006 mg/kg	Flocks at slaughter houses, pooled representative samples from each flock. PCP in all samples, 92.7% with <0.010 mg/kg. One with >0.1 mg/kg, from flock housed on treated wood shavings. Canada GC-EC
4821 Liver	1072 Inhalation Ingestion Dermal	0.002-0.419 mg/kg	0.012 mg/kg	Flocks at slaughter houses, pooled representative samples from each flock. PCP in all samples, 75.6% with <0.010 mg/kg. 8 with >0.1 mg/kg (temporary action level set by Agriculture Canada is 0.1 ppm), from flocks housed on treated wood shavings. Canada GC-EC
CHICKENS; FOOD CONTAMINATION; PESTICIDE RESIDUES; TERRESTRIAL; LIVER; ADIPOSE TISSUE; BIOLOGICAL MONITORING; CANADA; BIOACCUMULATION; ENVIRONMENTAL EXPOSURE; MEASUREMENT METHODS				
Neidert, E.; Saschenbrecker, P.W.; Patterson, J.R. 1984 Journal of Environmental Science and Health B19(7):579-592				

Phenol, pentachloro-
87-86-5
C6-H-Cl5-O
MW 266.35, MP 190-191 C, BP 309-310 C (decomp), VP 40 mm Hg at 211.2 C

Clam

Tissue	Cases Exposure Route	Range	Mean	General Information
4822 Body		a) Not given b) Not given	a) 1.7 ng/g b) 3.4 ng/g	a) Site 1 b) Site 2 Collected 11/80. Pooled whole clams, mean sample wt 30 g Maine, Portland GC-EC

MAINE; BODY; DDT; POLYCHLORINATED BIPHENYLS; HEXACHLOROBENZENE; PENTACHLOROPHENOL; PHTHALATES; BIOACCUMULATION; MOLLUSKS; WATER POLLUTION; CHLORINE ORGANIC COMPOUNDS
Ray, L.E.; Murray, H.E.; Giam, C.S. 1983 Chemosphere 12(7/8):1031-1038

Honeybee
APIS MELLIFERA L.

Tissue	Cases Exposure Route	Range	Mean	General Information
4823 Body		a) 81-172 ppb b) 75-136 ppb c) 9615-15,411 ppb d) 2163-12,997 ppb	a) 126 ppb b) 71 ppb c) 12,513 ppb d) 5192 ppb	a) Controls, 1st summer b) Controls, 2nd summer c) Treated, 1st summer d) Treated, 2nd summer Controls, untreated wood. Wood of beehives treated in 1980 to retention of 6.4 kg/cu m (0.40 lb/cu ft). 5 colonies/treatment. Wisconsin, Madison GC-EC, MS

INSECTS; ARSENIC; COPPER; TIN; ANIMAL POPULATIONS; WOOD PRESERVATIVES; PENTACHLOROPHENOL; CHROMIUM; DELIBERATE EXPOSURE; BODY; TERRESTRIAL; PESTICIDES
Kalnins, M.A.; Detroy, B.F. 1984 Journal of Agricultural and Food Chemistry 32(5):1176-1180

Killifish
ORYZIAS LATIPES

Tissue	Cases Exposure Route	Range	Mean	General Information
4824 Body	a) 84 b) 84 Ingestion	a) 10,000-10 ppb b) 2,000-200 ppb	a) Not applicable b) Not applicable	a) 1-60 d, peak (10,000 ppb) on d 1. Initial exposure, 3.2 g in 4 L acetone sprayed on pond. 14 data points, 6 fish/point b) 1-20 d, peak (4,000 ppb) from 5-15 d, then rapid decrease. Constant exposure to 10.5+/-0.3 ppb for 15 d. 14 data points, 6 fish/point Ranges of means. Estimated from graph. Japan GC-EC

BODY; DELIBERATE EXPOSURE; JAPAN; CHLORINATED HYDROCARBONS; CHLORINE ORGANIC COMPOUNDS; CHLOROBENZENES; HEXACHLOROBENZENE; PENTACHLOROPHENOL; WATER POLLUTION; INDUSTRIAL POLLUTION; BIOACCUMULATION; FISHES; ANIMAL POPULATIONS; PESTICIDE RESIDUES; AQUATIC
Sugiura, K.; Aoki, M.; Kaneko, S.; Daisaku, I.; Komatsu, Y.; Shibuya, H.; Suzuki, H.; Goto, M. 1984 Archives of Environmental Contamination and Toxicology 13:745-758

Phenol, 2-amino-4,6-dinitro-
96-91-3
C6-H5-N3-O5
MW 199.12, MP 169-170 C
Oyster, American
CRASSOSTREA VIRGINICA

Tissue	Cases Exposure Route	Range	Mean	General Information
4825 Body	152 Ingestion Injection	a) 3-5.5 ng/mg b) 1-9 ng/mg c) Not given d) Not given e) Not given f) Not given Wet wt	a) Not applicable b) Not applicable c) 73,987+/-15,050 d) 12,093+/-3762 e) 10,463+/-2417 f) 9730+/-2796 DPM/g Wet wt	a) 1-56 d, peak (12 ng/mg) on d 42 during exposure to 0.24 mg/l for 42 d, 70 cases b) 1-56 d, peak (16 ng/mg) on d 35 during exposure to 0.02 mg/l for 42 d, 70 cases c) 1 hr after 17.8 umole/kg IM, 3 cases d) 6 hr after 17.8 umole/kg IM, 3 cases e) 24 hr after 17.8 umole/kg IM, 3 cases f) 48 hr after 17.8 umole/kg IM, 3 cases a) , b) estimated from graph. Scintillation counting
4826 Gills	12 Ingestion Injection	a) Not given b) Not given c) Not given d) Not given	a) 89,317+/-20,340 b) 12,167+/-1808 c) 15,605+/-5831 d) 11,671+/-1745 DPM/g Wet wt	a) 1 hr b) 6 hr c) 24 hr d) 48 hr Times after 17.8 umole/kg IM. 3 cases/time point. Scintillation counting
4827 Mantle	12 Ingestion Injection	a) Not given b) Not given c) Not given d) Not given	a) 94,240+/-18,788 b) 13,165+/-2919 c) 11,199+/-340 d) 10,869+/-3762 DPM/g Wet wt	a) 1 hr b) 6 hr c) 24 hr d) 48 hr Times after 17.8 umole/kg IM. 3 cases/time point. Scintillation counting
4828 Muscle	12 Ingestion Injection	a) Not given b) Not given c) Not given d) Not given	a) 102,974+/-43,086l b) 8720+/-1691 c) 10,034+/-3007 d) 12,428+/-2343 DPM/g Wet wt	a) 1 hr b) 6 hr c) 24 hr d) 48 hr Times after 17.8 umole/kg IM. 3 cases/time point. Scintillation counting
BODY; MUSCLES; GILLS; MANTLE; DELIBERATE EXPOSURE; MOLLUSKS; BIOACCUMULATION; RADIONUCLIDES; WATER POLLUTION; AQUATIC Burton, D.T.; Cooper, K.R.; Goodfellow, W.L., Jr.; Rosenblatt, D.H. 1984 Archives of Environmental Contamination and Toxicology 13:653-663				

Trout, rainbow
SALMO GAIRDNERI

Tissue	Cases Exposure Route	Range	Mean	General Information
4829 Adipose	3 Ingestion	Not given	2.16+/-0.39 nmol/mg Wet wt	6 hr after 17.8 umol/kg IP, 2% dose recovered. Scintillation counting
4830 Gills	a) 5 b) 3 Ingestion	a) Not given b) Not given	a) 14.95+/-9.70x10(E-7)mg/mg b) 1.18+/-0.39 nmol/mg Wet wt	a) After 42 d exposure to 0.23 mg/l b) 6 hr after 17.8 umol/kg IP, 1% dose recovered. Scintillation counting

(next page)

Phenol, 2-amino-4,6-dinitro-
96-91-3
C6-H5-N3-O5
MW 199.12, MP 169-170 C

Trout, rainbow
SALMO GAIRDNERI

(continued)

Tissue	Cases Exposure Route	Range	Mean	General Information
4831 Intestine	a) 5 b) 3 Ingestion	a) Not given b) Not given	a) 1.20+/-0.34x10(E-7)mg/mg b) 13.41+/-0.79 nmol/mg Wet wt	a) After 42 d exposure to 0.23 mg/l b) 6 hr after 17.8 umol/kg IP, 10% dose recovered. Scintillation counting
4832 Kidney	3 Ingestion	Not given	4.46+/-1.47 nmol/mg Wet wt	6 hr after 17.8 umol/kg IP, 3% dose recovered. Scintillation counting
4833 Liver	a) 5 b) 3 Ingestion	a) Not given b) Not given	a) 2.17+/-0.95x10(E-7)mg/mg b) 27.14+/-10.19 nmoles/mg Wet wt	a) After 42 d exposure to 0.23 mg/l b) 6 hr after 17.8 umol/kg IP, 21% dose recovered, includes gall bladder. Scintillation counting
4834 Muscle	a) 45 b) 45 c) 5 d) 3 Ingestion Injection	a) 0.62+/-1.00-1.45+/-0.58x10(E-7)mg/mg b) 0.06+/-0.15-0.09+/-0.03x10(E-7)mg/mg c) Not given d) Not given Wet wt	a) Not applicable b) Not applicable c) 0.80+/-0.27x10(E-7)mg/mg d) 0.06+/-0.03 nmoles/mg Wet wt	a) 1-42 d exposure to 0.23 mg/l, plateau after d 7, 9 time points, 5 fish/time point b) 1-42 d exposure to 0.02 mg/l, peak (0.21+/-0.17x10(E-7)mg/mg) at 28 d, 9 time points, 5 fish/time point c) After 42 d exposure to 0.23 mg/l d) 6 hr after 17.8 umol/kg IP. <1% dose recovered. Scintillation counting
4835 Skin	5 Ingestion	Not given	20.15+/-18.31x10(E-7)mg/mg Wet wt	After 42 d exposure to 0.23 mg/l. Scintillation counting
4836 Spleen	3 Ingestion	Not given	1.95+/-0.41 nmol/mg Wet wt	6 hr after 17.8 umol/kg IP, 1% dose recovered. Scintillation counting

MUSCLES; SKIN; LIVER; GILLS; INTESTINES; ADIPOSE TISSUE; KIDNEYS; SPLEEN; FISHES; AQUATIC; DELIBERATE EXPOSURE; BIOACCUMULATION; HEALTH HAZARDS; RADIONUCLIDES; METABOLITES

Cooper, K.R.; Burton, D.T.; Goodfellow, W.L.; Rosenblatt, D.H. 1984 Journal of Toxicology and Environmental Health 14:731-747

Phenol, 2,4,6-trichloro-
88-06-2
C6-H3-Cl3-O
MW 197.5, MP 68 C, BP 244.5 C, VP 1 mm Hg at 76.5 C
Killifish
ORYZIAS LATIPES

Tissue	Cases Exposure Route	Range	Mean	General Information
4837 Body	a) 78 b) 102 Ingestion	a) 10,000-10 ppb b) 1,000-100 ppb	a) Not applicable b) Not applicable	a) 1-60 d, peak (10,000 ppb) on d 1. Initial exposure, 3.2 g in 4 L acetone sprayed on pond. 13 data points, 6 fish/point b) 1-20 d, peak (2,000 ppb) from 5-15 d, then rapid decrease. Constant exposure to 9.80+/-0.29 ppd for 15 d. 17 data points, 6 fish/point Estimated from graph. Ranges of means. Japan GC-EC
BODY; DELIBERATE EXPOSURE; JAPAN; CHLORINATED HYDROCARBONS; CHLORINE ORGANIC COMPOUNDS; CHLOROBENZENES; HEXACHLOROBENZENE; PENTACHLOROPHENOL; WATER POLLUTION; INDUSTRIAL POLLUTION; BIOACCUMULATION; FISHES; ANIMAL POPULATIONS; PESTICIDE RESIDUES; AQUATIC				
Sugiura, K.; Aoki, M.; Kaneko, S.; Daisaku, I.; Komatsu, Y.; Shibuya, H.; Suzuki, H.; Goto, M. 1984 Archives of Environmental Contamination and Toxicology 13:745-758				

Phosphoramidothioic acid, acetyl-, O,S-dimethyl ester
30560-19-1
C4-H10-N-O3-P-S
MW 183.16, MP 72-80 C
Bluebird, western
SIALIA MEXICANA

Tissue	Cases Exposure Route	Range	Mean	General Information
4838 Brain	a) 2 b) 4	a) 0.30-0.33 ppm b) 0-0.15 ppm	a) Not given b) Not given	a) Collected 2-6 hr after application b) Day 2/3 Forest sprayed with 0.85 kg/ha acephate. No correlation between ChE activities and levels. Residues decrease at 14 d, disappear at 21. Brain ChE inhibition better indicator of exposure than tissue residue. Arizona, Kiabab National Forest GLC
4839 Liver	a) 2 b) 3	a) 0.07-0.16 ppm b) 0.01-0.48 ppm	a) Not given b) Not given	a) Collected 2-6 hr after application b) Day 2/3 Forest sprayed with 0.85 kg/ha acephate. No correlation between ChE activities and levels. Residues decrease at 14 d, disappear at 21. Brain ChE inhibition better indicator of exposure than tissue residue. Arizona, Kiabab National Forest GLC
BRAIN; LIVER; TERRESTRIAL; BIRDS; DELIBERATE EXPOSURE; ENVIRONMENTAL EXPOSURE; ARIZONA; ORGANOPHOSPHATES; PESTICIDES; PESTICIDE RESIDUES; BIOLOGICAL MONITORING; CROP DUSTING; FORESTRY; LAND POLLUTION; METABOLITES; CHOLINESTERASE ACTIVITY; ANIMAL POPULATIONS				
Zinkl, J.G; Mack, P.D.; Mount, M.E. 1984 Environmental Toxicology and Chemistry 3:79-88				

Phosphoramidothioic acid, acetyl-, O,S-dimethyl ester
30560-19-1
C4-H10-N-O3-P-S
MW 183.16, MP 72-80 C

Junco, grey-headed
JUNCO CANICEPS

Tissue	Cases Exposure Route	Range	Mean	General Information
4840 Brain	a) 3 b) 4 c) 2	a) 1.20-3.10 ppm b) 0.40-5.75 ppm c) 0-0.02 ppm	a) Not given b) Not given c) Not given	a) Collected 2-6 hr after application b) Day 2 c) Day 7-8 Forest sprayed with 0.85 kg/ha acephate. No correlation between ChE activites and levels. Residues decrease at 14 d, disappear at 21. Brain ChE inhibition better indicator of exposure than tissue residue. Arizona, Kiabab National Forest GLC
4841 Liver	a) 3 b) 2 c) 4	a) 0.25-4.40 ppm b) 0-0.88 ppm c) 0.02-0.98 ppm	a) Not given b) Not given c) Not given	a) Collected 2-6 hr after application b) Day 2 c) Day 7-8 Forest sprayed with 0.85 kg/ha acephate. No correlation between ChE activites and levels. Residues decrease at 14 d, disappear at 21. Brain ChE inhibition better indicator of exposure than tissue residue. Arizona, Kiabab National Forest GLC

BRAIN; LIVER; TERRESTRIAL; BIRDS; DELIBERATE EXPOSURE; ENVIRONMENTAL EXPOSURE; ARIZONA; ORGANOPHOSPHATES; PESTICIDES; PESTICIDE RESIDUES; BIOLOGICAL MONITORING; CROP DUSTING; FORESTRY; LAND POLLUTION; METABOLITES; CHOLINESTERASE ACTIVITY; ANIMAL POPULATIONS
Zinkl, J.G; Mack, P.D.; Mount, M.E. 1984 Environmental Toxicology and Chemistry 3:79-88

Nuthatch, pygmy
SITTA PYGMAEA

Tissue	Cases Exposure Route	Range	Mean	General Information
4842 Brain	a) 2 b) 4	a) 0-0.35 ppm b) 0-0.12 ppm	a) Not given b) Not given	a) Day 2 after application b) Day 3 Forest sprayed with 0.85 kg/ha acephate. No correlation between ChE activities and levels. Residues decrease at 14 d, disappear at 21. Brain ChE inhibition better indicator of exposure than tissue residue. Arizona, Kiabab National Forest GLC
4843 Liver	a) 2 b) 4	a) 0.96-2.10 ppm b) 0-0.18 ppm	a) Not given b) Not given	a) Day 2 after application b) Day 3 Forest sprayed with 0.85 kg/ha acephate. No correlation between ChE activities and levels. Residues decrease at 14 d, disappear at 21. Brain ChE inhibition better indicator of exposure than tissue residue. Arizona, Kiabab National Forest GLC

BRAIN; LIVER; TERRESTRIAL; BIRDS; DELIBERATE EXPOSURE; ENVIRONMENTAL EXPOSURE; ARIZONA; ORGANOPHOSPHATES; PESTICIDES; PESTICIDE RESIDUES; BIOLOGICAL MONITORING; CROP DUSTING; FORESTRY; LAND POLLUTION; METABOLITES; CHOLINESTERASE ACTIVITY; ANIMAL POPULATIONS
Zinkl, J.G; Mack, P.D.; Mount, M.E. 1984 Environmental Toxicology and Chemistry 3:79-88

Phosphoramidothioic acid, acetyl-, O,S-dimethyl ester
30560-19-1
C4-H10-N-O3-P-S
MW 183.16, MP 72-80 C

Trout, rainbow
SALMO GAIRDNERI

Tissue	Cases Exposure Route	Range	Mean	General Information
4844 Body	180	a) 0.33-0.79 ppm b) 0.053-1.21 ppm c) 12-187 ppb d) 13-238 ppb	a) Not given b) Not given c) Not given d) Not given	a) 0.88-23.1 ppm in water as Orthene 75-SP, 84 treated, 6 untreated controls b) 0.88-20 ppm as technical acephate (97%), 75 treated, 15 controls c) Methamidophos (metabolite) levels, same treatment and fish as (a) d) Methamidophos levels, same treatment and fish as (b) Range of means Uptake rapid, reaching equilibrium levels in 5-8 d. No significant bioconcentration (mean BCF=0.0533). Canada LC
BODY; FISHES; AQUATIC; DELIBERATE EXPOSURE; CANADA; INSECTICIDES; ORGANOPHOSPHATES; PESTICIDE RESIDUES; WATER POLLUTION				
Geen, G.H.; McKeown, B.A.; Oloffs, P.C. 1984 Journal of Environmental Science and Health, Part B 9:131-155				

Warbler, Grace's
DENDROICA GRACIAE

Tissue	Cases Exposure Route	Range	Mean	General Information
4845 Brain	a) 2 b) 2 c) 2	a) 0.50-7.70 ppm b) 0.40-0.90 ppm c) 0.06-0.06 ppm	a) Not given b) Not given c) Not given	a) Collected 2-6 hr after application b) Day 2 c) Day 8 Forest sprayed with 0.85 kg/ha acephate. No correlation between ChE activities and levels. Residues decrease at 14 d, disappear at 21. Brain ChE inhibition better indicator of exposure than tissue residue. Arizona, Kiabab National Forest GLC
4846 Liver	a) 2 b) 1 c) 2	a) 2.60-3.60 ppm b) 0.04-0.04 ppm c) 0-0.06 ppm	a) Not given b) Not given c) Not given	a) Collected 2-6 hr after application b) Day 2 c) Day 8 Forest sprayed with 0.85 kg/ha acephate. No correlation between ChE activities and levels. Residues decrease at 14 d, disappear at 21. Brain ChE inhibition better indicator of exposure than tissue residue. Arizona, Kiabab National Forest GLC
BRAIN; LIVER; TERRESTRIAL; BIRDS; DELIBERATE EXPOSURE; ENVIRONMENTAL EXPOSURE; ARIZONA; ORGANOPHOSPHATES; PESTICIDES; PESTICIDE RESIDUES; BIOLOGICAL MONITORING; CROP DUSTING; FORESTRY; LAND POLLUTION; METABOLITES; CHOLINESTERASE ACTIVITY; ANIMAL POPULATIONS				
Zinkl, J.G; Mack, P.D.; Mount, M.E. 1984 Environmental Toxicology and Chemistry 3:79-88				

Phosphoramidothioic acid, acetyl-, O,S-dimethyl ester

30560-19-1
C4-H10-N-O3-P-S
MW 183.16, MP 72-80 C

Warbler, yellow-rumped
DENDROICA CORONATA

Tissue	Cases Exposure Route	Range	Mean	General Information
4847 Brain	a) 2 b) 6 c) 3	a) 0.77-1.30 ppm b) 0-2.10 ppm c) 0-1.17 ppm	a) Not given b) Not given c) Not given	a) Collected 2-6 hr after application b) Day 2 c) Day 8 Forest sprayed with 0.85 kg/ha acephate. No correlation between ChE activities and levels. Residues decrease at 14 d, disappear at 21. Brain ChE inhibition better indicator of exposure than tissue residue. Arizona, Kiabab National Forest GLC
4848 Liver	a) 2 b) 6 c) 3	a) 1.86-4.90 ppm b) 0.27-2.00 ppm c) 0.13-0.38 ppm	a) Not given b) Not given c) Not given	a) Collected 2-6 hr after application b) Day 2 c) Day 8 Forest sprayed with 0.85 kg/ha acephate. No correlation between ChE activities and levels. Residues decrease at 14 d, disappear at 21. Brain ChE inhibition better indicator of exposure than tissue residue. Arizona, Kiabab National Forest GLC

BRAIN; LIVER; TERRESTRIAL; BIRDS; DELIBERATE EXPOSURE; ENVIRONMENTAL EXPOSURE; ARIZONA; ORGANOPHOSPHATES; PESTICIDES; PESTICIDE RESIDUES; BIOLOGICAL MONITORING; CROP DUSTING; FORESTRY; LAND POLLUTION; METABOLITES; CHOLINESTERASE ACTIVITY; ANIMAL POPULATIONS

Zinkl, J.G; Mack, P.D.; Mount, M.E. 1984 Environmental Toxicology and Chemistry 3:79-88

Phosphoramidothioic acid, O,S-dimethyl ester

10265-92-6
C2-H8-N-O2-P-S
MW 141.14, MP 44.5 C, VP 3X10(E-4) mm Hg at 30 C

Bluebird, western
SIALIA MEXICANA

Tissue	Cases Exposure Route	Range	Mean	General Information
4849 Brain	a) 2 b) 4	a) 0.14-0.16 ppm b) 0-0.02 ppm	a) Not given b) Not given	a) Collected 2-6 hr after application b) Day 2/3 Forest sprayed with 0.85 kg/ha acephate. No correlation between ChE activities and levels. Residues decrease at 14 d, disappear at 21. Brain ChE inhibition better indicator of exposure than tissue residue. Arizona, Kiabab National Forest GLC

(next page)

Phosphoramidothioic acid, O,S-dimethyl ester
10265-92-6
C2-H8-N-O2-P-S
MW 141.14, MP 44.5 C, VP 3X10(-4) mm Hg at 30 C

Bluebird, western
SIALIA MEXICANA

(continued)

Tissue	Cases Exposure Route	Range	Mean	General Information
4850 Liver	a) 2 b) 3	a) 0.02-0.08 ppm b) 0-0.03 ppm	a) Not given b) Not given	a) Collected 2-6 hr after application b) Day 2/3 Forest sprayed with 0.85 kg/ha acephate. No correlation between ChE activities and levels. Residues decrease at 14 d, disappear at 21. Brain ChE inhibition better indicator of exposure than tissue residue. Arizona, Kiabab National Forest GLC
BRAIN; LIVER; TERRESTRIAL; BIRDS; DELIBERATE EXPOSURE; ENVIRONMENTAL EXPOSURE; ARIZONA; ORGANOPHOSPHATES; PESTICIDES; PESTICIDE RESIDUES; BIOLOGICAL MONITORING; CROP DUSTING; FORESTRY; LAND POLLUTION; METABOLITES; CHOLINESTERASE ACTIVITY; ANIMAL POPULATIONS Zinkl, J.G; Mack, P.D.; Mount, M.E. 1984 Environmental Toxicology and Chemistry 3:79-88				

Junco, grey-headed
JUNCO CANICEPS

Tissue	Cases Exposure Route	Range	Mean	General Information
4851 Brain	a) 4 b) 4	a) 0.16-0.37 ppm b) 0.10-0.17 ppm	a) Not given b) Not given	a) Collected 2-6 hr after application b) Day 2 Forest sprayed with 0.85 kg/ha acephate. No correlation between ChE activities and levels. Residues decreased at 14 d, disappeared at 21. Brain ChE inhibition better indicator of exposure than tissue residue. Arizona, Kiabab National Forest GLC
4852 Liver	a) 3 b) 2 c) 4	a) 0.04-0.26 ppm b) 0-0.06 ppm c) 0-0.05 ppm	a) Not given b) Not given c) Not given	a) Collected 2-6 hr after application b) Day 2 c) Day 7-8 Forest sprayed with 0.85 kg/ha acephate. No correlation between ChE activites and levels. Residues decrease at 14 d, disappear at 21. Brain ChE inhibition better indicator of exposure than tissue residue. Arizona, Kiabab National Forest GLC
BRAIN; LIVER; TERRESTRIAL; BIRDS; DELIBERATE EXPOSURE; ENVIRONMENTAL EXPOSURE; ARIZONA; ORGANOPHOSPHATES; PESTICIDES; PESTICIDE RESIDUES; BIOLOGICAL MONITORING; CROP DUSTING; FORESTRY; LAND POLLUTION; METABOLITES; CHOLINESTERASE ACTIVITY; ANIMAL POPULATIONS Zinkl, J.G; Mack, P.D.; Mount, M.E. 1984 Environmental Toxicology and Chemistry 3:79-88				

Phosphoramidothioic acid, O,S-dimethyl ester
10265-92-6
C2-H8-N-O2-P-S
MW 141.14, MP 44.5 C, VP 3X10(E-4) mm Hg at 30 C

Nuthatch, pygmy
SITTA PYGMAEA

Tissue	Cases Exposure Route	Range	Mean	General Information
4853 Brain	a) 2 b) 4	a) 0-0.06 ppm b) 0-0.04 ppm	a) Not given b) Not given	a) Day 2 after application b) Day 3 Forest sprayed with 0.85 kg/ha acephate. No correlation between ChE activities and levels. Residues decrease at 14 d, disappear at 21. Brain ChE inhibition better indicator of exposure than tissue residue. Arizona, Kiabab National Forest GLC
4854 Liver	a) 2 b) 4	a) 0.18-0.19 ppm b) 0-0.04 ppm	a) Not given b) Not given	a) Day 2 after application b) Day 3 Forest sprayed with 0.85 kg/ha acephate. No correlation between ChE activities and levels. Residues decrease at 14 d, disappear at 21. Brain ChE inhibition better indicator of exposure than tissue residue. Arizona, Kiabab National Forest GLC

BRAIN; LIVER; TERRESTRIAL; BIRDS; DELIBERATE EXPOSURE; ENVIRONMENTAL EXPOSURE; ARIZONA; ORGANOPHOSPHATES; PESTICIDES; PESTICIDE RESIDUES; BIOLOGICAL MONITORING; CROP DUSTING; FORESTRY; LAND POLLUTION; METABOLITES; CHOLINESTERASE ACTIVITY; ANIMAL POPULATIONS
Zinkl, J.G; Mack, P.D.; Mount, M.E. 1984 Environmental Toxicology and Chemistry 3:79-88

Warbler, Grace's
DENDROICA GRACIAE

Tissue	Cases Exposure Route	Range	Mean	General Information
4855 Brain	a) 2 b) 2 c) 2	a) 0.02-0.10 ppm b) 0.03-0.08 ppm c) 0.02-0.04 ppm	a) Not given b) Not given c) Not given	a) Collected 2-6 hr after application b) Day 2 c) Day 8 Forest sprayed with 0.85 kg/ha acephate. No correlation between ChE activities and levels. Residues decrease at 14 d, disappear at 21. Brain ChE inhibition better indicator of exposure than tissue residue. Arizona, Kiabab National Forest GLC
4856 Liver	a) 2 b) 1 c) 2	a) 0.04-0.10 ppm b) 0.01-0.01 ppm c) 0-0.03 ppm	a) Not given b) Not given c) Not given	a) Collected 2-6 hr after application b) Day 2 c) Day 8 Forest sprayed with 0.85 kg/ha acephate. No correlation between ChE activities and levels. Residues decrease at 14 d, disappear at 21. Brain ChE inhibition better indicator of exposure than tissue residue. Arizona, Kiabab National Forest GLC

BRAIN; LIVER; TERRESTRIAL; BIRDS; DELIBERATE EXPOSURE; ENVIRONMENTAL EXPOSURE; ARIZONA; ORGANOPHOSPHATES; PESTICIDES; PESTICIDE RESIDUES; BIOLOGICAL MONITORING; CROP DUSTING; FORESTRY; LAND POLLUTION; METABOLITES; CHOLINESTERASE ACTIVITY; ANIMAL POPULATIONS
Zinkl, J.G; Mack, P.D.; Mount, M.E. 1984 Environmental Toxicology and Chemistry 3:79-88

Phosphoramidothioic acid, O,S-dimethyl ester
10265-92-6
C2-H8-N-O2-P-S
MW 141.14, MP 44.5 C, VP 3X10(E-4) mm Hg at 30 C
Warbler, yellow-rumped
DENDROICA CORONATA

Tissue	Cases Exposure Route	Range	Mean	General Information
4857 Brain	a) 2 b) 6 c) 3	a) 0.09-0.18 ppm b) 0-0.10 ppm c) 0-0.05 ppm	a) Not given b) Not given c) Not given	a) Collected 2-6 hr after application b) Day 2 c) Day 8 Forest sprayed with 0.85 kg/ha acephate. No correlation between ChE activities and levels. Residues decrease at 14 d, disappear at 21. Brain ChE inhibition better indicator of exposure than tissue residue. Arizona, Kiabab National Forest GLC
4858 Liver	a) 2 b) 6 c) 3	a) 0.07-0.64 ppm b) 0.07-0.19 ppm c) 0-0.03 ppm	a) Not given b) Not given c) Not given	a) Collected 2-6 hr after application b) Day 2 c) Day 8 Forest sprayed with 0.85 kg/ha acephate. No correlation between ChE activities and levels. Residues decrease at 14 d, disappear at 21. Brain ChE inhibition better indicator of exposure than tissue residue. Arizona, Kiabab National Forest GLC

BRAIN; LIVER; TERRESTRIAL; BIRDS; DELIBERATE EXPOSURE; ENVIRONMENTAL EXPOSURE; ARIZONA; ORGANOPHOSPHATES; PESTICIDES; PESTICIDE RESIDUES; BIOLOGICAL MONITORING; CROP DUSTING; FORESTRY; LAND POLLUTION; METABOLITES; CHOLINESTERASE ACTIVITY; ANIMAL POPULATIONS

Zinkl, J.G; Mack, P.D.; Mount, M.E. 1984 Environmental Toxicology and Chemistry 3:79-88

Phosphoric acid, dimethyl ester, ester with 3-hydroxy-N,N-dimethylcrotonamide, (E)- (8 CI); Phosphoric acid, 3-(dimethylamino)-1-methyl-3-oxo-1-propenyl dimethyl ester, (E)- (9 CI)
141-66-2
C8-H16-N-O5-P
MW 237.21, BP 400 C at 760 mm Hg, VP 1X10(E-4) at 20 C
Grackle, great-tailed
QUISCALUS MEXICANUS

Tissue	Cases Exposure Route	Range	Mean	General Information
4859 Gut	a) 3 b) 5 Ingestion	a) Not detectable b) Not detectable-34 ppm Wet wt	a) Not detectable b) Not given Wet wt	a) Controls, Fort Hancock b) Poisoned, fairgrounds, 3 with undetectable levels, 2 detectable (16, 34 ppm) Upper GI tract with ingesta. Undetected organophosphate does not eliminate possibility of poisoning Sorghum seeds found in four of the poisoned birds. Texas, West, rodeo and fair grounds and Fort Hancock Good health and general condition. Good adipose tissue indicating adequate diet Average acetylcholinesterase depression was 80%, well above the 50% depression required for mortality. No gross pathology GC/MS

BIRDS; BRAIN; ORGANOPHOSPHATES; POISONING; NECROPSIES; TEXAS; INTESTINES; TERRESTRIAL; ENVIRONMENTAL EXPOSURE

Mitchell, C.A.; White, D.H.; Kolbe, E.J.; Biever, R.C. 1984 Journal of Wildlife Diseases 20(3):256-257

Phosphorodithioic acid, O,O-dimethyl ester, S-ester with N-(mercaptomethyl)phthalimide (8 CI); Phosphorodithioic acid, S-((1,3-dihydro-1,3-dioxo-2H-isoindol-2-yl)methyl) O,O-dimethyl ester (9 CI)
732-11-6
C11-H12-N-O4-P-S2
MW 317.32, MP 71.9 C, VP 1X10(E-3) mm Hg at 50 C

Goat
CAPRA HIRCUS

Tissue	Cases Exposure Route	Range	Mean	General Information
4860 Blood	1 Ingestion	a) Not given b) Not given c) Not given d) Not given	a) 75 ppb b) 32 ppb c) 2 ppb d) 0 ppb	a) Acute single-dose 200 mg/kg body wt, 2 hr post-treatment b) 7 hr post-treatment c) 24 hr d) 48 hr 70% recovery from whole blood. Values estimated from graph. California, Davis GC
4861 Urine	7 Ingestion	a) Not detected (ND)-40.0 ppm b) ND-9.8 ppm c) ND-151 ppm d) ND-11.6 ppm e) ND-1838 ppm	a) 7.2+/-1.4 ppm b) 0.9+/-0.3 ppm c) 19.1+/-5.6 ppm d) 1.2+/-0.4 ppm e) Not given S.E.	a) 5 mg/kg body wt/d, for 7 d, measured DMDPT b) 5 mg/kg/d, 7 d, measured DMPT c) 10 mg/kg/d, 7 d, DMDPT d) 10 mg/kg/d, 7 d, DMPT e) Acute single-dose (200 mg/kg), range of daily means, 7 d Metabolites:DMPPT, o,o-dimethyl phosphorodithioate and DMPT, o,o-dimethyl phosphorothioate. e) peak 5360 ppm <24 hr after treatment. DMDPT useful indication of exposure, immediately present in urine. California, Davis With higher doses, some miosis, tachycardia, diarrhea, hypersalivation, muscle fasiculation; sternal recumbancy, depression, dysphea Depressed cholinesterase activity GC/MS

URINE; BLOOD; IMIDAN; INSECTICIDES; PESTICIDE RESIDUES; ORGANOPHOSPHATES; GOATS; POISONING; METABOLITES; CALIFORNIA; TERRESTRIAL; DELIBERATE EXPOSURE
Mount, M.E. 1984 Toxicology and Applied Pharmacology 72:236-244

Phosphorodithioic acid, S-((tert-butylthio)methyl) O,O-diethyl ester (8 CI); Phosphorodithioic acid, S-(((1,1-dimethylethyl)thio)methyl) O,O-diethyl ester (9 CI)
13071-79-9
C9-H21-O2-P-S3
MW 288.41, MP -29.2 C

Cattle
BOS sp.

Tissue	Cases Exposure Route	Range	Mean	General Information
4862 Blood, whole	a) 3 b) 3 c) 3 Ingestion	a) 64.2-75.6 uM sulfhydryl b) 12.0-15.0 uM sulfhydryl c) 4.3-7.8 uM sulfhydryl /mL/hr	a) Not given b) Not given c) Not given	a) Healthy b) Moderately affected c) Severely affected, cholinesterase levels 6-20% of controls Sulfhydryl release is a measure of cholinesterase activity, quantitates organophosphate poisoning Holstein dairy cows receiving 0.75 mg/kg in feed Samples taken 3 days post-exposure Some mortality in herd of 120, up to 2 wks after ingestion. Ontario Pupil constriction, diarrhea, colic, salivation, CNS depression, ataxia, dyspnea, muscle fasciculations and strained urination. Extreme respiratory distress, collapse, death Dehydration, hemorrhages along bowel, edema of mesentery, chemical odor, lungs did not collapse. Most severely affected had lowest cholinesterase activity Colorimetry
4863 Kidney	a) 3 b) 1 Ingestion	a) Not detectable-0.017 ug/g b) Not given Wet wt	a) Not given b) Not detectable	a) 1 d after ingestion b) 4 d after ingestion Necropsies. Holstein heifers 6-24 mos old. 7.5 mg/kg in feed Not found in brain, blood, or muscles. Ontario Pupil constriction, diarrhea, colic, salivation, CNS depression, ataxia, dyspnea, muscle fasciculations and strained urination. Extreme respiratory distress, collapse, death Dehydration, hemorrhages along bowel, edema of mesentery, chemical odor, lungs did not collapse. Most severely affected had lowest cholinesterase activity GC/flame photometry
4864 Liver	a) 3 b) 1 Ingestion	a) 0.54-0.83 ug/g b) Not given Wet wt	a) Not given b) 0.07 ug/g Wet wt	a) 1 d after ingestion b) 4 d after ingestion Necropsies. Holstein heifers 6-24 mos old. 7.5 mg/kg in feed Not found in brain, blood, or muscles. Ontario Pupil constriction, diarrhea, colic, salivation, CNS depression, ataxia, dyspnea, muscle fasciculations and strained urination. Extreme respiratory distress, collapse, death Dehydration, hemorrhages along bowel, edema of mesentery, chemical odor, lungs did not collapse. Most severely affected had lowest cholinesterase activity GC/flame photometry

CATTLE; ACCIDENTAL POISONING; FEED; ORGANOPHOSPHATES; BLOOD; CHOLINESTERASE ACTIVITY

Boermans, H.J.; Black, W.D.; Chesney, J.; Robb, R.; Shewfelt, W. 1984 The Canadian Veterinary Journal 25:335-338

Phosphorothioic acid, O,O-diethyl, O-(2-isopropyl-6-methyl-4-pyrimidinyl ester (8 CI); Phosphorothioic acid, O,O-diethyl O-(6-methyl-2-(1-methylethyl)-4-pyrimidinyl) ester (9 CI)
333-41-5
C12-H21-N2-O3-P-S
MW 304.36, MP decomp above 120 C, BP 83-84 C at 0.002 mm Hg, VP 4.1X10(E-4) at 20 C, 1.1X10(E-3) at 40 C

Goat
CAPRA HIRCUS

Tissue	Cases Exposure Route	Range	Mean	General Information
4865 Blood	a) 1 b) 1 c) 3 Ingestion	a) 0-106 ug/L b) 0-15360 ug/L c) 0-126 ug/L	a) Not given b) Not given c) Not given	a) 150 mg/kg single dose, 0-72 hr, peak 24 hr b) 700 mg/kg single dose, 0-120 hr, peak 36 hr c) 5.0 mg/kg/d for 7 d, measured 1 d after treatment, peak d 6 Ranges of means. Estimated from graph. 0.5 mg/kg/d considered "effect dosage". Data given on metabolite DETP in urine. California Constricted pupils, hypersalivation, CNS depression, vocalization, abnormal pain, ataxia, colic, groaning, weakness, disorientation. Cholinesterse activity varied. GC

GOATS; DIAZINON; BLOOD; METABOLITES; CALIFORNIA; TERRESTRIAL; INSECTICIDES; POISONING; PESTICIDE RESIDUES; DELIBERATE EXPOSURE; BIOINDICATORS; MEASUREMENT METHODS; LACTATION
Mount, M.E. 1984 American Journal of Veterinary Research 45(4):817-824

Phosphorothioic acid, O,O-dimethyl O-(p-nitrophenyl) ester (8 CI); Phosphorothioic acid, O,O-dimethyl O-(4-nitrophenyl) ester (9 CI)
298-00-0
C8-H10-N-O5-P-S
MW 263.23, MP 37-38 C

Trout, rainbow
SALMO GAIRDNERI

Tissue	Cases Exposure Route	Range	Mean	General Information
4866 Body	6	40,000-77,000 ug/kg Lipid wt	Not given	From ponds teated with 100 ug/l (actual water analysis 45-90 ug/l). 14 d exposure. Triplicate ponds, duplicate fish. Length 81-92 mm, wt 6.94-12.3 g. Variation between ponds not greater than between individuals. United Kingdom, Kent, Headcorn GLC

PESTICIDE RESIDUES; FISHES; BIOACCUMULATION; LIPIDS; UNITED KINGDOM; ORGANOPHOSPHATES; INSECTICIDES; AQUATIC; DELIBERATE EXPOSURE; TROUT
Crossland, N.O.; Bennett, D. 1984 Ecotoxicology and Environmental Safety 8:471-481

Phosphorothioic acid, O,O-dimethyl O-(4-nitro-m-tolyl) ester (8 CI); Phosphorothioic acid, O,O-dimethyl O-(3-methyl-4-nitrophenyl) ester (9 CI)
122-14-5
C9-H12-N-O5-P-S
MW 277.3, BP 118 C, also reported as 140-145 C (decomp), VP 6X10(E-6) mm Hg at 20 C

Trout, brook
SALVELINUS FONTINALIS

Tissue	Cases Exposure Route	Range	Mean	General Information
4867 Adipose	1 Ingestion	Not applicable	214.0 ng/g	After 2nd application. South Basin, previously iced-over, average depth 15 m. Aerial spraying May-June 1977. Mean wt 235.1 g, length 27.3 cm. Canada, Quebec, Lac Ste-Anne GC-flame ionization detector
4868 Intestine	1 Ingestion	Not applicable	117.0 ng/g	After 2nd application. South Basin, previously iced-over, average depth 15 m. Aerial spraying May-June 1977. Mean wt 235.1 g, length 27.3 cm. Canada, Quebec, Lac Ste-Anne GC-flame ionization detector
4869 Muscle	a) 5 b) 4 c) 2 d) 1 Ingestion	a) Not given b) 56.7-107.0 ng/g c) Not given d) Not given	a) <2 ng/g b) Not given c) 11.7 ng/g d) 156.0 ng/g	a) Before 1st application. North Basin, average depth 5-6 m b) After 1st application, peak day 3 (none collected day 1) c) Before 2nd application. South Basin, previously iced-over, average depth 15 m d) After 2nd application Aerial spraying May-June 1977. Range of means. Mean wt 235.1 g, length 27.3 cm. Canada, Quebec, Lac Ste-Anne GC-flame ionization detector
4870 Ovary	1 Ingestion	Not applicable	167.0 ng/g	After 2nd application. South Basin, previously iced-over, average depth 15 m. Aerial spraying May-June 1977. Mean wt 235.1 g, length 27.3 cm. Canada, Quebec, Lac Ste-Anne GC-flame ionization detector
4871 Viscera	a) 5 b) 4 c) 2 Ingestion	a) Not given b) 49.0-230.0 ng/g c) Not given	a) <2 ng/g b) Not given c) 16.2 ng/g	a) Before 1st application. North Basin, average depth 5-6 m b) After 1st application, peak day 5 (more collected day 1) c) Before 2nd application (South Basin, previously iced-over, average depth 15 m) Aerial spraying May-June 1977. Range of means. Wt 99.9-582.2 g. Length 22.4-37.5 cm. Canada, Quebec, Lac Ste-Anne GC-flame ionization detector

FISHES; BIOACCUMULATION; INSECTICIDES; ORGANOPHOSPHATES; LIVER; MUSCLES; INTESTINES; OVARIES; CANADA; ADIPOSE TISSUE; PESTICIDE RESIDUES; AQUATIC; ENVIRONMENTAL EXPOSURE; WATER POLLUTION

Holmes, S.B.; Kingsbury, P.D.; Mamarbachi, G.; Mathieu, P. 1984 Bulletin of Envivonmental Contamination and Toxicology 33:468-475

Phosphorothioic acid, O,O-dimethyl O-(4-nitro-m-tolyl) ester (8 CI); Phosphorothioic acid, O,O-dimethyl O-(3-methyl-4-nitrophenyl) ester (9 CI)

122-14-5
C9-H12-N-O5-P-S
MW 277.3, BP 118 C, also reported as 140-145 C (decomp), VP 6X10(E-6) mm Hg at 20 C

Trout, lake
SALVELINUS NAMAYCUSH

Tissue	Cases Exposure Route	Range	Mean	General Information
4872 Adipose	a) 5 b) 8 c) 2 d) 9 Ingestion	a) Not given b) 12.0-280.0 ng/g c) Not given d) 283.0-665.0 ng/g	a) <0.4 ng/g b) Not given c) 18.5 ng/g d) Not given	a) Before 1st application. North Basin 5-6 m average depth b) After 1st application, peak day 5 c) Before 2nd application. South Basin previously iced-over, 15 m average depth d) After 2nd application, peak day 1 Aerial spraying May-June 1977. Range of means. Mean wt 1585.3 g, length 56.8 cm. Canada, Quebec, Lac Ste-Anne GC-flame ionization detector
4873 Intestine	a) 5 b) 8 c) 2 d) 9 Ingestion	a) Not given b) 5.8-96.3 ng/g c) Not given d) 44.2-313.0 ng/g	a) <0.4 ng/g b) Not given c) 2.5 ng/g d) Not given	a) Before 1st application. North Basin 5-6 m average depth b) After 1st application, peak day 5 c) Before 2nd application. South Basin previously iced-over, 15 m average depth d) After 2nd application, peak day 1 Aerial spraying May-June 1977. Range of means. Mean wt 1585.3 g, length 56.8 cm. Canada, Quebec, Lac Ste-Anne GC-flame ionization detector
4874 Liver	a) 5 b) 8 c) 2 d) 9 Ingestion	a) Not given b) 2.4-16.1 ng/g c) Not given d) 17.9-96.6 ng/g	a) <0.4 ng/g b) Not given c) 1.1 ug/g d) Not given	a) Before 1st application. North Basin 5-6 m average depth b) After 1st application, peak day 3 c) Before 2nd application. South Basin previously iced-over, 15 m average depth d) After 2nd application, peak day 1 Aerial spraying May-June 1977. Range of means. Mean wt 1585.3 g, length 56.8 cm. Canada, Quebec, Lac Ste-Anne GC-flame ionization detector
4875 Muscle	a) 5 b) 8 c) 2 d) 9 Ingestion	a) Not given b) 41.6-96.8 ng/g c) Not given d) 121.0-306.0 ng/g	a) <0.4 ng/g b) Not given c) 11.2 ng/g d) Not given	a) Before 1st application. North Basin 5-6 m average depth b) After 1st application, peak day 5 c) Before 2nd application. South Basin previously iced-over, 15 m average depth d) After 2nd application, peak day 1 Aerial spraying May-June 1977. Range of means. Mean wt 1585.3 g, length 56.8 cm. Canada, Quebec, Lac Ste-Anne GC-flame ionization detector
4876 Ovary	Ingestion	a) Not given b) 4.9-48.2 ng/g	a) <0.4 ng/g b) Not given	a) Before 1st application. North Basin, average depth 5-6 m b) After 1st application, peak day 5 Aerial spraying May-June 1977. Range of means. No females collected day 3. Mean wt 1585.3 g, length 56.8 cm. Canada, Quebec, Lac Ste-Anne GC-flame ionization detector

FISHES; BIOACCUMULATION; INSECTICIDES; ORGANOPHOSPHATES; LIVER; MUSCLES; INTESTINES; OVARIES; CANADA; ADIPOSE TISSUE; PESTICIDE RESIDUES; AQUATIC; ENVIRONMENTAL EXPOSURE; WATER POLLUTION

Holmes, S.B.; Kingsbury, P.D.; Mamarbachi, G.; Mathieu, P. 1984 Bulletin of Environmental Contamination and Toxicology 33:468-475

Phosphorus
7723-14-0
P
AtW 30.97376, MP 44.1 C, BP 280 C, VP 10 mm Hg at 127 C

Beaver
CASTOR CANADENSIS

Tissue	Cases Exposure Route	Range	Mean	General Information
4877 Intestine	4 Ingestion	Not given	859+/-311 ug/g	Undisturbed watershed. Specimens from fur trapper. Canada, Ontario, Georgian Bay, Tadenac Lake ES
4878 Kidney	4 Ingestion	Not given	2048+/-165	Undisturbed watershed. Specimens from fur trapper. Canada, Ontario, Georgian Bay, Tadenac Lake ES
4879 Liver	4 Ingestion	Not given	2415+/-303 ug/g	Undisturbed watershed. Specimens from fur trapper. Canada, Ontario, Georgian Bay, Tadenac Lake ES
4880 Muscle	4 Ingestion	Not given	2785+/-238 ug/g	Undisturbed watershed. Specimens from fur trapper. Canada, Ontario, Georgian Bay, Tadenac Lake ES

BEAVERS; OTTERS; RACCOONS; CANADA; BIOACCUMULATION; BIOMAGNIFICATION; SELENIUM; IRON; COPPER; CADMIUM; CALCIUM; ALUMINUM; MAGNESIUM; MANGANESE; SODIUM; NICKEL; PHOSPHORUS; ZINC; POTASSIUM; DETOXIFICATION; DIETS; LIVER; KIDNEYS; INTESTINES; MUSCLES; AQUATIC; TERRESTRIAL; ENVIRONMENTAL EXPOSURE; BIOLOGICAL MONITORING

Wren, C.D. 1984 Science of the Total Environment 34:177-184

Cattle
BOS sp.

Tissue	Cases Exposure Route	Range	Mean	General Information
4881 Blood, plasma	1 Ingestion	a) 1.3-1.2 mmol/l b) 1.5-2.5 mmol/l	a) Not applicable b) Not applicable	a) 1-8 d, steady-state during 100 g Ca-acetate/d intra-abomasal infusion or Ca stress b) 1-8 d, peak (2.5 mmol/l) 2 d after 200 ug 1,25-Dihydroxycholecalciferol, second peak (3 mmol/l) during Ca stress Ca stress induced by withdrawal of Ca-acetate for 35 hr. Norway Chem

BLOOD PLASMA; CATTLE; TERRESTRIAL; DELIBERATE EXPOSURE; NORWAY; NUTRITIONAL DEFICIENCIES; CALCIUM; BIOACCUMULATION; MINERAL METABOLISM; LACTATION; ANIMAL FEEDS; FOOD ADDITIVES; DRUGS; DRUG THERAPY

Hove, K.; Hilde B.L. 1984 Canadian Journal of Animal Science 64:227-228

Phosphorus
7723-14-0
P
AtW 30.97376, MP 44.1 C, BP 280 C, VP 10 mm Hg at 127 C

Chicken
GALLUS sp.

Tissue	Cases Exposure Route	Range	Mean	General Information
4882 Blood, plasma	120 Ingestion	a) 16-25 mg/l b) 21-27 mg/l c) 26-30 mg/l	a) Not applicable b) Not applicable c) Not applicable	a) Maize diet, 0-0.3% added P, peak (25 mg/l) when diet contained 0.3% added P b) 50% maize-20% triticale diet, 0-0.3% added P, peak (28 mg/l) when diet contained 0.2% added P c) 20% maize-50% triticale diet, 0-0.3% added P, peak (30 mg/l) when diet contained 0.3% added P Dietary triticale lessens need for P supplementation. France

BLOOD PLASMA; CHICKENS; TERRESTRIAL; DELIBERATE EXPOSURE; FRANCE; NUTRITIONAL DEFICIENCIES; PHOSPHORUS; ANIMAL FEEDS; BIOACCUMULATION; FOOD ADDITIVES; DIETS; MINERAL METABOLISM

Saveur, B. 1984 Nutrition Reports International 29(4):911-919

Cod, Pacific
GADUS MACROCEPHALUS

Tissue	Cases Exposure Route	Range	Mean	General Information
4883 Muscle	Ingestion	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given	a) 2207+/-220 ug/g b) 2017+/-96 ug/g c) 2115+/-83 ug/g d) 216+/-17.9 mg/100 g e) 2058+/-203 ug/g f) 2070+/-185 ug/g Wet wt	a) Near Cape Flattery, WA, 50 fish, mean wt 2623+/-1174 g b) Cape Sarichef, AK, 12 fish, 1143+/-649 g c) Cape Ommaney, AK, 11 fish, 798+/-497 g d) Overall mean, combined sites e) Nape section of fish, 30 fillets f) Tail section of fish, 30 fillets. Pacific Ocean ES

FISHES; BIOLOGICAL MONITORING; PACIFIC OCEAN; ALUMINUM; BARIUM; CALCIUM; CHROMIUM; COPPER; IRON; MERCURY; POTASSIUM; LITHIUM; MAGNESIUM; MANGANESE; SODIUM; PHOSPHORUS; STRONTIUM; ZINC; AQUATIC; ENVIRONMENTAL EXPOSURE; WATER POLLUTION; FOOD CONTAMINATION; MUSCLES

Teeny, F.M.; Gauglitz, E.J., Jr.; Hall, A.S.; Houle, C.R. 1984 Journal of Agricultural and Food Chemistry 32:852-855

Lizard, water
TRITURUS PYRRHOGASTER

Tissue	Cases Exposure Route	Range	Mean	General Information
4884 Kidney	a) 5 b) 5 Injection	a) Not given b) Not given	a) 2399+/-250 ug/g b) 2356+/-228 ug/g Wet wt	a) Controls, distilled water (0.1 ml/head), I.M. b) CdCl2, I.M. during 11 d (0.5 mg, 3x and 1.0 mg Cd/kg body wt, 2x), killed 1 d after last injection Kidney wt 36+/-8-43+/-6 mg ES

(next page)

Phosphorus
7723-14-0
P
AtW 30.97376, MP 44.1 C, BP 280 C, VP 10 mm Hg at 127 C

Lizard, water
TRITURUS PYRRHOGASTER

(continued)

Tissue	Cases Exposure Route	Range	Mean	General Information
4885 Liver	a) 5 b) 5 Injection	a) Not given b) Not given	a) 2370+/-293 ug/g b) 2298+/-94 ug/g Wet wt	a) Controls, distilled water (0.1 ml/head), I.M. b) CdCl2, I.M. during 11 d (0.5 mg, 3x and 1.0 mg Cd/kg body wt, 2x), killed 1 d after last injection Liver wt 349+/-108-411+/-80 mg ES
AMPHIBIANS; LIVER; KIDNEYS; DELIBERATE EXPOSURE; CADMIUM; COPPER; ZINC; AQUATIC; TERRESTRIAL; IRON; MAGNESIUM; CALCIUM; PHOSPHORUS Suzuki, K.T.; Akitomi, H.; Kawamura, R. 1984 Toxicology Letters 21:179-184				

Mackerel, Atka
PLEUROGRAMMUS MONOPTERYGIUS

Tissue	Cases Exposure Route	Range	Mean	General Information
4886 Muscle	20 Ingestion	Not given	2569+/-151 ug/g Wet wt	Off Kodiak Island, AK. Mean wt 461+/-156 g Pacific Ocean ES
FISHES; BIOLOGICAL MONITORING; PACIFIC OCEAN; ALUMINUM; BARIUM; CALCIUM; CHROMIUM; COPPER; IRON; MERCURY; POTASSIUM; LITHIUM; MAGNESIUM; MANGANESE; SODIUM; PHOSPHORUS; STRONTIUM; ZINC; AQUATIC; ENVIRONMENTAL EXPOSURE; WATER POLLUTION; FOOD CONTAMINATION; MUSCLES Teeny, F.M.; Gauglitz, E.J., Jr.; Hall, A.S.; Houle, C.R. 1984 Journal of Agricultural and Food Chemistry 32:852-855				

Otter
LUTRA CANADENSIS

Tissue	Cases Exposure Route	Range	Mean	General Information
4887 Intestine	4 Ingestion	Not given	2290+/-834 ug/g	Undisturbed watershed. Specimens from fur trapper. Canada, Ontario, Georgian Bay, Tadenac Lake ES
4888 Kidney	4 Ingestion	Not given	1602+/-494 ug/g	Undisturbed watershed. Specimens from fur trapper. Canada, Ontario, Georgian Bay, Tadenac Lake ES
4889 Liver	4 Ingestion	Not given	2500+/-216 ug/g	Undisturbed watershed. Specimens from fur trapper. Canada, Ontario, Georgian Bay, Tadenac Lake ES

(next page)

Phosphorus
7723-14-0
P
AtW 30.97376, MP 44.1 C, BP 280 C, VP 10 mm Hg at 127 C

Otter
LUTRA CANADENSIS

(continued)

Tissue	Cases Exposure Route	Range	Mean	General Information
4890 Muscle	4 Ingestion	Not given	2678+/-312 ug/g	Undisturbed waterched. Specimens from fur trapper. Canada, Ontario, Georgian Bay, Tadenac Lake ES
BEAVERS; OTTERS; RACCOONS; CANADA; BIOACCUMULATION; BIOMAGNIFICATION; SELENIUM; IRON; COPPER; CADMIUM; CALCIUM; ALUMINUM; MAGNESIUM; MANGANESE; SODIUM; NICKEL; PHOSPHORUS; ZINC; POTASSIUM; DETOXIFICATION; DIETS; LIVER; KIDNEYS; INTESTINES; MUSCLES; AQUATIC; TERRESTRIAL; ENVIRONMENTAL EXPOSURE; BIOLOGICAL MONITORING				
Wren, C.D. 1984 Science of the Total Environment 34:177-184				

Pollock, walleye
THERAGRA CHALCOGRAMMA

Tissue	Cases Exposure Route	Range	Mean	General Information
4891 Muscle	Ingestion	a) Not given b) Not given c) Not given d) Not given	a) 1493+/-231 ug/g b) 1999+/-198 ug/g c) 2028+/-50 ug/g d) 177+/-17.1 mg/100 g Wet wt	a) Caught in Bering Sea, AK, 20 fish, mean wt 965+/-352 g b) Shelik of Strait, AK, 10 fish, 1300+/-488 g c) Cape Ommaney, AK, 12 fish, 323+/-223 g. Site variations in levels. Pacific Ocean ES
FISHES; BIOLOGICAL MONITORING; PACIFIC OCEAN; ALUMINUM; BARIUM; CALCIUM; CHROMIUM; COPPER; IRON; MERCURY; POTASSIUM; LITHIUM; MAGNESIUM; MANGANESE; SODIUM; PHOSPHORUS; STRONTIUM; ZINC; AQUATIC; ENVIRONMENTAL EXPOSURE; WATER POLLUTION; FOOD CONTAMINATION; MUSCLES				
Teeny, F.M.; Gauglitz, E.J., Jr.; Hall, A.S.; Houle, C.R. 1984 Journal of Agricultural and Food Chemistry 32:852-855				

Pomfret
BRAMA JAPONICA

Tissue	Cases Exposure Route	Range	Mean	General Information
4892 Muscle	24 Ingestion	Not given	2174+/-186 ug/g Wet wt	Gulf of Alaska. Mean wt 1088+/-162 g Pacific Ocean ES
FISHES; BIOLOGICAL MONITORING; PACIFIC OCEAN; ALUMINUM; BARIUM; CALCIUM; CHROMIUM; COPPER; IRON; MERCURY; POTASSIUM; LITHIUM; MAGNESIUM; MANGANESE; SODIUM; PHOSPHORUS; STRONTIUM; ZINC; AQUATIC; ENVIRONMENTAL EXPOSURE; WATER POLLUTION; FOOD CONTAMINATION; MUSCLES				
Teeny, F.M.; Gauglitz, E.J., Jr.; Hall, A.S.; Houle, C.R. 1984 Journal of Agricultural and Food Chemistry 32:852-855				

Phosphorus
7723-14-0
P
AtW 30.97376, MP 44.1 C, BP 280 C, VP 10 mm Hg at 127 C

Raccoon
PROCYON LOTOR

Tissue	Cases Exposure Route	Range	Mean	General Information
4893 Kidney	4 Ingestion	Not given	2463+/-168 ug/g	Undisturbed watershed. Specimens from fur trapper. Canada, Ontario, Georgian Bay, Tadenac Lake ES
4894 Liver	4 Ingestion	N t given	2097+/-228 ug/g	Undisturbed watershed. Specimens from fur trapper. Canada, Ontario, Georgian Bay, Tadenac Lake ES
4895 Muscle	4 Ingestion	Not given	2312+/-422 ug/g	Undisturbed watershed. Specimens from fur trapper. Canada, Ontario, Georgian Bay, Tadenac Lake ES

BEAVERS; OTTERS; RACCOONS; CANADA; BIOACCUMULATION; BIOMAGNIFICATION; SELENIUM; IRON; COPPER; CADMIUM; CALCIUM; ALUMINUM; MAGNESIUM; MANGANESE; SODIUM; NICKEL; PHOSPHORUS; ZINC; POTASSIUM; DETOXIFICATION; DIETS; LIVER; KIDNEYS; INTESTINES; MUSCLES; AQUATIC; TERRESTRIAL; ENVIRONMENTAL EXPOSURE; BIOLOGICAL MONITORING
Wren, C.D. 1984 Science of the Total Environment 34:177-184

Shad, American
ALOSA SAPIDISSIMA

Tissue	Cases Exposure Route	Range	Mean	General Information
4896 Muscle	13 Ingestion	Not given	2231+/-148 ug/g Wet wt	Near Seaside, OR. Mean wt 1039+/-251 g Pacific Ocean ES

FISHES; BIOLOGICAL MONITORING; PACIFIC OCEAN; ALUMINUM; BARIUM; CALCIUM; CHROMIUM; COPPER; IRON; MERCURY; POTASSIUM; LITHIUM; MAGNESIUM; MANGANESE; SODIUM; PHOSPHORUS; STRONTIUM; ZINC; AQUATIC; ENVIRONMENTAL EXPOSURE; WATER POLLUTION; FOOD CONTAMINATION; MUSCLES
Teeny, F.M.; Gauglitz, E.J., Jr.; Hall, A.S.; Houle, C.R. 1984 Journal of Agricultural and Food Chemistry 32:852-855

Sheep
OVIS sp.

Tissue	Cases Exposure Route	Range	Mean	General Information
4897 Blood, serum	a) 16 b) 16 c) 16	a) Not given b) Not given c) Not given	a) 8.4 mg/dl b) 8.5 mg/dl c) 9.2 mg/dl +/-0.4 S.E.	Lambs whose dams had basal diet fortified with cottonseed meal for 2 yr b) Same as a), basal diet plus 7% undigested sewage solids c) Same as a), basal diet Did not differ from controls. New Mexico AAS

KIDNEYS; LIVER; BONES; SHEEP; TERRESTRIAL; ENVIRONMENTAL EXPOSURE; DELIBERATE EXPOSURE; NEW MEXICO; CADMIUM; CHROMIUM; COPPER; IRON; MERCURY; NICKEL; LEAD; ZINC; METALS; ANIMAL FEEDS; AGRICULTURE; BIOACCUMULATION; BIOLOGICAL MONITORING; FARMS; FOOD CONTAMINATION; LAND POLLUTION; SEWAGE; CALCIUM; BLOOD SERUM; MAGNESIUM; POTASSIUM; PHOSPHORUS; SODIUM
Hudgens, R.E.; Hallford, D.M. 1984 Nutrition Reports International 29(1):11-21

Phosphorus
7723-14-0
P
AtW 30.97376, MP 44.1 C, BP 280 C, VP 10 mm Hg at 127 C

Silkworm
BOMBYX MORI

Tissue	Cases Exposure Route	Range	Mean	General Information
4898 Alimentary canal	Ingestion	a) Not given b) Not given	a) 6340+/-398 ug/g b) 7500+/-954 ug/g Dry wt	a) Controls b) Treatment After diet containing no (controls), or 80 ug Cd/g wet wt, fed from hatching until 6th day of 5th instar. Japan AAS
4899 Fat body	Ingestion	a) Not given b) Not given	a) 2990+/-352 ug/g b) 3120+/-209 ug/g Dry wt	a) Controls b) Treatment After diet containing no (controls), or 80 ug Cd/g wet wt, fed from hatching until 6th day of 5th instar. Japan AAS
4900 Gonads	Ingestion	a) Not given b) Not given	a) 11,800 ug/g b) 13,100 ug/g Dry wt	a) Controls b) Treatment After diet containing no (controls), or 80 ug Cd/g wet wt, fed from hatching until 6th day of 5th instar. Japan AAS
4901 Head	Ingestion	a) Not given b) Not given	a) 5910+/-847 ug/g b) 6680+/-130 ug/g Dry wt	a) Controls b) Treatment Larvae fed artificial diet containing none (controls), or 5 and 80 ug/ Cd/g wet diet from hatching to 4th instar and then for 5 d at 5th instar, respectively. Japan AAS
4902 Integument	Ingestion	a) Not given b) Not given	a) 763+/-84 ug/g b) 745+/-124 ug/g Dry wt	a) Controls b) Treatment After diet containing no (controls), or 80 ug Cd/g wet wt, fed from hatching until 6th day of 5th instar. Japan AAS
4903 Malpighian tubes	Ingestion	a) Not given b) Not given	a) 9890+/-478 ug/g b) 7460+/-914 ug/g Dry wt	a) Controls b) Treatment After diet containing no (controls), or 80 ug Cd/g wet wt, fed from hatching until 6th day of 5th instar. Japan AAS

(next page)

Phosphorus
7723-14-0
P
AtW 30.97376, MP 44.1 C, BP 280 C, VP 10 mm Hg at 127 C

Silkworm
BOMBYX MORI

(continued)

Tissue	Cases Exposure Route	Range	Mean	General Information
4904 Silk gland	Ingestion	a) Not given b) Not given	a) 4120+/-1800 ug/g b) 5610+/-967 ug/g Dry wt	a) Controls b) Treatment Larvae fed artificial diet containing none (controls), or 5 and 80 ug/ Cd/g wet diet from hatching to 4th instar and then for 5 d at 5th instar, respectively. Japan AAS
4905 Trachea	Ingestion	a) Not given b) Not given	a) 3220+/-87 ug/g b) 2960+/-207 ug/g Dry wt	a) Controls b) Treatment Larvae fed artificial diet containing none (controls), or 5 and 80 ug/ Cd/g wet diet from hatching to 4th instar and then for 5 d at 5th instar, respectively. Japan AAS

SILK GLAND; HEAD; TRACHEA; MALPIGHIAN TUBES; GASTROINTESTINAL TRACT; GONADS; FAT BODY; INTEGUMENT; DELIBERATE EXPOSURE; SILKWORMS; TERRESTRIAL; JAPAN; METAL POISONING; METALS; CADMIUM; ZINC; COPPER; CALCIUM; IRON; MAGNESIUM; MANGANESE; ALUMINUM; SODIUM; POTASSIUM; BIOACCUMULATION
Suzuki, K.T.; Aoki, Y.; Nishikawa, M.; Masui, H.; Matsubara, F. 1984 Comparative Biochemistry and Physiology 79C(2):249-253

Sole, Dover
MICROSTOMUS PACIFICUS

Tissue	Cases Exposure Route	Range	Mean	General Information
4906 Muscle	Ingestion	a) Not given b) Not given c) Not given d) Not given	a) 1547+/-202 ug/g b) 1576+/-87 ug/g c) 1840+/-211 ug/g d) 161+/-17.8 mg/100 g Wet wt	a) Caught near Newport, OR, 29 fish, mean wt 660+/-326 g b) Cape Ommaney, AK, 11 fish, 506+/-214 g c) Santa Cruz, CA, 10 fish, 212+/-68 g d) Overall mean, combined sites. Site variations in levels. Pacific Ocean ES

FISHES; BIOLOGICAL MONITORING; PACIFIC OCEAN; ALUMINUM; BARIUM; CALCIUM; CHROMIUM; COPPER; IRON; MERCURY; POTASSIUM; LITHIUM; MAGNESIUM; MANGANESE; SODIUM; PHOSPHORUS; STRONTIUM; ZINC; AQUATIC; ENVIRONMENTAL EXPOSURE; WATER POLLUTION; FOOD CONTAMINATION; MUSCLES
Teeny, F.M.; Gauglitz, E.J., Jr.; Hall, A.S.; Houle, C.R. 1984 Journal of Agricultural and Food Chemistry 32:852-855

Phosphorus
7723-14-0
P
AtW 30.97376, MP 44.1 C, BP 280 C, VP 10 mm Hg at 127 C

Swine
SUS sp.

Tissue	Cases Exposure Route	Range	Mean	General Information
4907 Milk	60 Ingestion	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given g) Not given h) Not given	a) 0.13 % b) 0.13 % c) 0.13 % d) 0.12 % e) 0.15 % f) 0.15 % g) 0.16 % h) 0.16 %	a) Colostrum, no dietary supplement b) Colostrum, 50 ppm Zn c) Colostrum, 500 ppm Zn d) Colostrum, 5000 ppm Zn e) After 3 wk of lactation, no dietary supplement f) After 3 wk of lactation, 50 ppm Zn g) After 3 wk of lactation, 500 ppm Zn h) After 3 wk of lactation, 5000 ppm Zn Crossbred and pure Yorkshire gilts, mean pretreatment wt 30 kg AAS

SWINE; COLOSTRUM; MILK; CALCIUM; COPPER; IRON; MAGNESIUM; MINERALS; PHOSPHORUS; ZINC; ANIMAL FEEDS; DIETS; LACTATION
Hill, G.M.; Miller, E.R.; Ku, P.K. 1983 Journal of Animal Science 57(1):123-129

Whiting, Pacific
MERLUCCIUS PRODUCTUS

Tissue	Cases Exposure Route	Range	Mean	General Information
4908 Muscle	a) 20 b) 32 Ingestion	a) Not given b) Not given	a) 2077+/-255 ug/g b) 1848+/-145 ug/g Wet wt	a) Near Astoria, OR, mean wt 873+/-246 g b) Refrigerated 2 d in seawater, Astoria, OR, 937+/-227 g. Interspecies variations among 7 species studied. Pacific Ocean ES

FISHES; BIOLOGICAL MONITORING; PACIFIC OCEAN; ALUMINUM; BARIUM; CALCIUM; CHROMIUM; COPPER; IRON; MERCURY; POTASSIUM; LITHIUM; MAGNESIUM; MANGANESE; SODIUM; PHOSPHORUS; STRONTIUM; ZINC, AQUATIC; ENVIRONMENTAL EXPOSURE; WATER POLLUTION; FOOD CONTAMINATION; MUSCLES
Teeny, F.M.; Gauglitz, E.J., Jr.; Hall, [illegible]; Houle, C.R. 1984 Journal of Agricultural and Food Chemistry 32:852-855

Phosphorus, isotope of mass 32
14596-37-3
P
Fish

Tissue	Cases Exposure Route	Range	Mean	General Information
4909 Bone				Review. Evaluation of current recommendations for P-32 (and stable P) bioaccumulation factors in edible fish.
4910 Gastrointestinal tract				Review. Evaluation of current recommendations for P-32 (and stable P) bioaccumulation factors in edible fish.

(next page)

Phosphorus, isotope of mass 32
14596-37-3
P
Fish

(continued)

Tissue	Cases Exposure Route	Range	Mean	General Information
4011 Skin				Review. Evaluation of current recommendations for P-32 (and stable P) bioaccumulation factors in edible fish.
4012 Urine				Review. Evaluation of current recommendations for P-32 (and stable P) bioaccumulation factors in edible fish.

BONE; SKIN; GASTROINTESTINAL TRACT; URINE; AQUATIC; ENVIRONMENTAL EXPOSURE; REVIEW; PHOSPHORUS; BIOACCUMULATION; RADIOISOTOPES; WATER POLLUTION; FISHES
Kahn, B.; Turgeon, K.S. 1984 Health Physics 46(2):321-338

Phthalic acid, bis(2-ethylhexyl) ester (8 CI); 1,2-Benzenedicarboxylic acid, bis(2-ethylhexyl) ester (9 CI)
[illegible]-21-7
C24-H38-O4
MW 390.54
Clam

Tissue	Cases Exposure Route	Range	Mean	General Information
4013 Body		a) Not given b) Not given	a) 170 ng/g b) 110 ng/g	a) Site 1 b) Site 2 Collected 11/80. Pooled whole clams, mean sample wt 30 g Maine, Portland GC-EC

MAINE; BODY; DDT; POLYCHLORINATED BIPHENYLS; HEXACHLOROBENZENE; PENTACHLOROPHENOL; PHTHALATES; BIOACCUMULATION; MOLLUSKS; WATER POLLUTION; CHLORINE ORGANIC COMPOUNDS
Ray, L.E.; Murray, H.E.; Giam, C.S. 1983 Chemosphere 12(7/8):1031-1038

Minnow, sheepshead
CYPRINODON VARIEGATUS

Tissue	Cases Exposure Route	Range	Mean	General Information
4014 Body	</= 40 Ingestion Inhalation Dermal	1.8-11.8 ug/g	Not applicable	Uptake and accumulation kinetics. Range of means, 0-96 hr, peak 72 hr. Initial water concentration 60 ng/ml. Initial uptake most rapid first 2 hr, steady state by 48 hr. Range of means metabolites 2.5-30 ug/g, peak 72 hr. More metabolites found in water. Fish wt 1-5 g. Washington, Pullman Radiometry; GC

FISHES; BODY; WASHINGTON; AQUATIC; WATER POLLUTION; INDUSTRIAL CHEMICALS; MEASUREMENT METHODS; RADIOISOTOPES; DELIBERATE EXPOSURE
Karara, A.H.; Hayton, W.L.; Archer, B.G. 1984 Journal of Analytical Toxicology 8:141-145

Phthalic acid, dibutyl ester (8 CI); 1,2-Benzenedicarboxylic acid, dibutyl ester (9 CI)
84-74-2
C16-H22-O4
MW 278.34, BP 340 C

Clam

Tissue	Cases Exposure Route	Range	Mean	General Information
4915 Body		a) Not given b) Not given	a) 100 ng/g b) 40 ng/g	a) Site 1 b) Site 2 Collected 11/80. Pooled whole clams, mean sample wt 30 g Maine, Portland GC-EC
MAINE; BODY; DDT; POLYCHLORINATED BIPHENYLS; HEXACHLOROBENZENE; PENTACHLOROPHENOL; PHTHALATES; BIOACCUMULATION; MOLLUSKS; WATER POLLUTION; CHLORINE ORGANIC COMPOUNDS Ray, L.E.; Murray, H.E.; Giam, C.S. 1983 Chemosphere 12(7/8):1031-1038				

Picric acid (8 CI); Phenol, 2,4,6-trinitro
88-89-1
C6-H3-N3-O7
MW 229.11, MP 122-123 C, VP 1 mm Hg at 195 C

Oyster, American
CRASSOSTREA VIRGINICA

Tissue	Cases Exposure Route	Range	Mean	General Information
4916 Body	152 Ingestion Injection	a) 0.5-25 ng/mg b) 1-6.5 ng/mg c) Not given d) Not given e) Not given f) Not given Wet wt	a) Not applicable b) Not applicable c) 254,691+/-151,016 d) 44,554+/-10,615 e) 10,844+/-2036 f) 6321+/-2777 DPM/g Wet wt	a) 1-56 d, peak (29 ng/mg) on d 42 during exposure to 0.45 mg/l for 42 d, 70 cases b) 1-56 d, peak (6.4 ng/mg) on d 35 during exposure to 0.05 mg/l for 42 d, 70 cases c) 1 hr after 18.5 umole/kg IM, 3 cases d) 6 hr after 18.5 umole/kg IM, 3 cases e) 24 hr after 18.5 umole/kg IM, 3 cases f) 48 hr after 18.5 umole/kg IM, 3 cases a) , b) estimated from graph. Scintillation counting
4917 Gills	12 Ingestion Injection	a) Not given b) Not given c) Not given d) Not given	a) 305,088+/-172,736 b) 35,508+/-10,970 c) 8280+/-1151 d) 10,193+/-7055 DPM/g Wet wt	a) 1 hr b) 6 hr c) 24 hr d) 48 hr Times after 18.5 umole/kg IM. 3 cases/time point. Scintillation counting
4918 Mantle	12 Ingestion Injection	a) Not given b) Not given c) Not given d) Not given	a) 445,182+/-134,413 b) 35,348+/-14,957 c) 8932+/-1638 d) 6164+/-3548 DPM/g Wet wt	a) 1 hr b) 6 hr c) 24 hr d) 48 hr Times after 18.5 umole/kg IM. 3 cases/time point. Scintillation counting

(next page)

Picric acid (8 CI); Phenol, 2,4,6-trinitro
88-89-1
C6-H3-N3-O7
MW 229.11, MP 122-123 C, VP 1 mm Hg at 195 C

Oyster, American
CRASSOSTREA VIRGINICA

(continued)

Tissue	Cases Exposure Route	Range	Mean	General Information
4919 Muscle	12 Ingestion Injection	a) Not given b) Not given c) Not given d) Not given	a) 554,419+/-440,340 b) 26,007+/-4833 c) 15,509+/-6454 d) 7738+/-4934 DPM/g Wet wt	a) 1 hr b) 6 hr c) 24 hr d) 48 hr Times after 18.5 umole/kg IM. 3 cases/time point. Scintillation counting
BODY; MUSCLES; GILLS; MANTLE; DELIBERATE EXPOSURE; MOLLUSKS; BIOACCUMULATION; RADIONUCLIDES; WATER POLLUTION; AQUATIC				
Burton, D.T.; Cooper, K.R.; Goodfellow, W.L., Jr.; Rosenblatt, D.H. 1984 Archives of Environmental Contamination and Toxicology 13:653-663				

Trout, rainbow
SALMO GAIRDNERI

Tissue	Cases Exposure Route	Range	Mean	General Information
4920 Adipose	3 Ingestion	Not given	9.99+/-4.39 nmol/mg Wet wt	6 hr after 42.3 umol/kg IP, 3% dose recovered. Scintillation counting
4921 Gills	a) 5 b) 3 Ingestion	a) Not given b) Not given	a) 0.55+/-0.12x10(E-7)mg/mg b) 16.31+/-5.82 nmol/mg Wet wt	a) After 42 d exposure to 0.45 mg/l b) 6 hr after 42.3 umol/kg IP, 5% dose recovered. Scintillation counting
4922 Intestine	a) 5 b) 3 Ingestion	a) Not given b) Not given	a) 1.12+/-0.47x10(E-7)mg/mg b) 26.33+/-5.88 nmol/mg Wet wt	a) After 42 d exposure to 0.45 mg/l b) 6 hr after 42.3 umol/kg IP, 9% dose recovered. Scintillation counting
4923 Kidney	3 Ingestion	Not given	46.[illegible]3+/-19.56 nmol/mg Wet wt	6 hr after 42.3 umol/kg IP, 14% dose recovered. Scintillation counting
4924 Liver	a) 5 b) 3 Ingestion	a) Not given b) Not given	a) 0.56+/-0.07x10(E-7)mg/mg b) 106.56+/-25.75 nmoles/mg Wet wt	a) After 42 d exposure to 0.45 mg/l b) 6 hr after 42.3 umol/kg IP, 34% dose recovered, includes gall bladder. Scintillation counting
4925 Muscle	a) 45 b) 45 c) 5 d) 3 Ingestion Injection	a) 0.70+/-1.22-4.23+/-1.53x10(E-7)mg/mg b) 0.05+/-0.07-0.28+/-0.14x10(E-7)mg/mg c) Not given d) Not given Wet wt	a) Not applicable b) Not applicable c) 0.72+/-0.53x10(E-7)mg/mg d) 12.47+/-4.36 nmoles/mg Wet wt	a) 1-42 d exposure to 0.45 mg/l, gradual increase, 9 time points, 5 fish/time point b) 1-42 d exposure to 0.05 mg/l, gradual increase, 9 time points, 5 fish/time point c) After 42 d exposure to 0.45 mg/l d) 6 hr after 42.3 umol/kg IP. 4% dose recovered. Scintillation counting

(next page)

Picric acid (8 CI); Phenol, 2,4,6-trinitro
88-89-1
C6-H3-N3-O7
MW 229.11, MP 122-123 C, VP 1 mm Hg at 195 C

Trout, rainbow
SALMO GAIRDNERI

(continued)

Tissue	Cases Exposure Route	Range	Mean	General Information
4926 Skin	5 Ingestion	Not given	5.16+/-3.53x10(E-7)mg/mg Wet wt	After 42 d exposure to 0.45 mg/l. Scintillation counting
4927 Spleen	3 Ingestion	Not given	37.02+/-11.48 nmol/mg Wet wt	6 hr after 42.3 umol/kg IP, 11% dose recovered. Scintillation counting
MUSCLES; SKIN; LIVER; GILLS; INTESTINES; ADIPOSE TISSUE; KIDNEYS; SPLEEN; FISHES; AQUATIC; DELIBERATE EXPOSURE; BIOACCUMULATION; HEALTH HAZARDS; RADIONUCLIDES; METABOLITES				
Cooper, K.R.; Burton, D.T.; Goodfellow, W.L.; Rosenblatt, D.H. 1984 Journal of Toxicology and Environmental Health 14:731-747				

Plutonium
7440-07-5
Pu
AtW 242, 244 (most stable known isotopes), MP 639.5 C (also reported as 641 C), BP 3232 C

Chicken
GALLUS sp.

Tissue	Cases Exposure Route	Range	Mean	General Information
4928 Liver	30 Ingestion	Not applicable	5+/-2 fCi/kg Median Wet wt	Approximately 0.5 yr old, collected from farms near Munich. Pu-239/240. Germany Alpha spectrometry
LIVER; SWINE; SHEEP; CHICKENS; TURKEYS; DEER; CHAMOIS; TERRESTRIAL; ENVIRONMENTAL EXPOSURE; GERMANY; CESIUM; PLUTONIUM; RADIONUCLIDES; BIOACCUMULATION; FALLOUT; FOOD CONTAMINATION				
Bunzl, K.; Kracke, W. 1984 Health Physics 46(2):466-470				

Swine
SUS sp.

Tissue	Cases Exposure Route	Range	Mean	General Information
4929 Liver	9 Ingestion	</=2-24 Wet wt	</=2 Median Wet wt	Approximately 1 yr old, collected from farms near Munich. Pu-239/240. Germany Alpha spectrometry
LIVER; SWINE; SHEEP; CHICKENS; TURKEYS; DEER; CHAMOIS; TERRESTRIAL; ENVIRONMENTAL EXPOSURE; GERMANY; CESIUM; PLUTONIUM; RADIONUCLIDES; BIOACCUMULATION; FALLOUT; FOOD CONTAMINATION				
Bunzl, K.; Kracke, W. 1984 Health Physics 46(2):466-470				

Plutonium, isotope of mass 239
15117-48-3
Pu
Cattle
BOS sp.

Tissue	Cases Exposure Route	Range	Mean	General Information
4980 Milk		0.0012-0.0043 Bq/l	Not given	Pu-239 and Pu-240. Collected 7-8/79 around Sellafield Works (nuclear reprocessing plant) and nearby Ravenglass Estuary. United Kingdom, West Cumbria
MILK; TERRESTRIAL; CATTLE; LACTATION; RADIONUCLIDES; WATER POLLUTION; STRONTIUM; CESIUM; PLUTONIUM; RABBITS				
Curtis, E.J.C.; Bradford, W.R.; Popplewell, D.S. 1984 Science of the Total Environment 35:267-283				

Chamois
RUPICAPRA RUPICAPRA

Tissue	Cases Exposure Route	Range	Mean	General Information
4981 Liver	16 Ingestion	57-230 fCi/kg Wet wt	100 fCi/kg Median Wet wt	Collected from area 80 km south of Munich, Germany, specimens approximately 10 yr old. Pu-239/240. Germany Alpha spectrometry
LIVER; SWINE; SHEEP; CHICKENS; TURKEYS; DEER; CHAMOIS; TERRESTRIAL; ENVIRONMENTAL EXPOSURE; GERMANY; CESIUM; PLUTONIUM; RADIONUCLIDES; BIOACCUMULATION; FALLOUT; FOOD CONTAMINATION				
Bunzl, K.; Kracke, W. 1984 Health Physics 46(2):466-470				

Deer, roe

Tissue	Cases Exposure Route	Range	Mean	General Information
4982 Liver	18 Ingestion	</=4-24 fCi/kg Wet wt	</=8 fCi/kg Median Wet wt	Approximately 2 yr old, collected in Lower Bavaria. Pu-239/240. Germany Alpha spectrometry
LIVER; SWINE; SHEEP; CHICKENS; TURKEYS; DEER; CHAMOIS; TERRESTRIAL; ENVIRONMENTAL EXPOSURE; GERMANY; CESIUM; PLUTONIUM; RADIONUCLIDES; BIOACCUMULATION; FALLOUT; FOOD CONTAMINATION				
Bunzl, K.; Kracke, W. 1984 Health Physics 46(2):466-470				

Rabbit, wild
ORYCTOLAGUS sp.

Tissue	Cases Exposure Route	Range	Mean	General Information
4983 Body, whole		Not given	0.019 Bq/kg	Collected 1977-82. Measured as Pu-239 & Pu-240. United Kingdom, West Cumbria
MILK; TERRESTRIAL; CATTLE; LACTATION; RADIONUCLIDES; WATER POLLUTION; STRONTIUM; CESIUM; PLUTONIUM; RABBITS				
Curtis, E.J.C.; Bradford, W.R.; Popplewell, D.S. 1984 Science of the Total Environment 35:267-283				

Plutonium, isotope of mass 239
15117-48-3
Pu
Sheep
OVIS sp.

Tissue	Cases Exposure Route	Range	Mean	General Information
4084 Liver	a) 22 b) 20 c) 10 Ingestion	a) 5-437 fCi/kg b) 11-366 fCi/kg c) 5-34 fCi/kg Wet wt	a) 22 fCi/kg b) 83 fCi/kg c) 18 fCi/kg Median Wet wt	a) North German moorland, 0.5-1.5 yr old b) North German moorland, 2-6 yr old c) Domestic, 1 yr old. Pu-239/240. Germany Alpha spectrometry

LIVER; SWINE; SHEEP; CHICKENS; TURKEYS; DEER; CHAMOIS; TERRESTRIAL; ENVIRONMENTAL EXPOSURE; GERMANY; CESIUM; PLUTONIUM; RADIONUCLIDES; BIOACCUMULATION; FALLOUT; FOOD CONTAMINATION
Bunzl, K.; Kracke, W. 1984 Health Physics 46(2):466-470

Swine
SUS sp.

Tissue	Cases Exposure Route	Range	Mean	General Information
4085 Liver	9 Ingestion	</=2-24 Wet wt	</=2 Median Wet wt	Approximately 1 yr old, collected from farms near Munich. Pu-239/240. Germany Alpha spectrometry

LIVER; SWINE; SHEEP; CHICKENS; TURKEYS; DEER; CHAMOIS; TERRESTRIAL; ENVIRONMENTAL EXPOSURE; GERMANY; CESIUM; PLUTONIUM; RADIONUCLIDES; BIOACCUMULATION; FALLOUT; FOOD CONTAMINATION
Bunzl, K.; Kracke, W. 1984 Health Physics 46(2):466-470

Turkey
MELEAGRIS GALLOPAVO

Tissue	Cases Exposure Route	Range	Mean	General Information
4086 Liver	7 Ingestion	Not applicable	3+/-1 fCi/kg Median Wet wt	Approximately 0.5 yr old, collected from farms near Munich. Pu-239/240. Germany Alpha spectrometry

LIVER; SWINE; SHEEP; CHICKENS; TURKEYS; DEER; CHAMOIS; TERRESTRIAL; ENVIRONMENTAL EXPOSURE; GERMANY; CESIUM; PLUTONIUM; RADIONUCLIDES; BIOACCUMULATION; FALLOUT; FOOD CONTAMINATION
Bunzl, K.; Kracke, W. 1984 Health Physics 46(2):466-470

Podocarp-7-en-15-oic acid, 13beta-methyl-13-vinyl-, (-)- (8 CI); 1-Phenanthrenecarboxylic acid, 7-ethenyl-1,2,3,4,4a,4b,5,6,7,8,10,10a-dodecahydro-1,4a,7-trimethyl-, (1R-(1alpha,4abeta,4balpha,7alpha,10aalpha))- (9 CI)
5835-26-7
C20-H30-O2
MW 302.44, MP 160 C
Trout, rainbow
SALMO GAIRDNERI

Tissue	Cases Exposure Route	Range	Mean	General Information
4987 Bile	29	a) Not given b) Not given c) Not given d) Not given e) Not given	a) 5+/-2 ug/mL b) 64 ug/mL c) 0.11+/-0.07 ug/mL d) 76.4+/-10.6 ug/mL e) 36 ug/mL	a) Free acid, 3 d exposure, 2.5 mg/L wood rosin b) Free acid, 20 d exposure, 2% v/v soln untreated pulp mill effluent c) Free acid, 30 d exposure, 1% v/v soln biologically treated pulp mill effluent d) Conjugated acid, same fish and treatment as (c) e) Conjugated acid (free acid not detectable), 10 d exposure, 0.5% v/v soln biologically treated pulp mill effluent Presence of conjugated resin acid suggests significance of hepato-biliary route in excretion of toxicants. Finland GC
FISHES; BILE; INDUSTRIAL POLLUTION; WATER POLLUTION; JUVENILES; RESINS; AQUATIC; DELIBERATE EXPOSURE; FINLAND				
Oikari, A.; Anas, E.; Kruzynski, G.; Holmbom, B. 1984 Bulletin of Environmental Contamination and Toxicology 33:233-240				

Podocarp-8(14)-en-15-oic acid, 13alpha-methyl-13-vinyl- (8 CI); 1-Phenanthrenecarboxylic acid, 7-ethenyl-1,2,3,4,4a,4b,5,6,7,9,10,10a,-dodecahydro-1,4a,7-trimethyl-, (1R-(1alpha,4abeta,4balpha,7beta,10aalpha))- (9 CI)
127-27-5
C20-H30-O2
MW 302.44, MP 217-219 C, BP 282 C at 18 mm Hg
Trout, rainbow
SALMO GAIRDNERI

Tissue	Cases Exposure Route	Range	Mean	General Information
4988 Bile	29	a) Not given b) Not given c) Not given d) Not given e) Not given	a) 9+/-4 ug/mL b) 16 ug/mL c) 0.09+/-0.06 ug/mL d) 48.1+/-3.4 ug/mL e) 36 ug/mL	a) Free acid, 3 d exposure, 2.5 mg/L wood rosin b) Free acid, 20 d exposure, 2% v/v soln untreated pulp mill effluent c) Free acid, 30 d exposure, 1% v/v soln biologically treated pulp mill effluent d) Conjugated acid, same fish and treatment as (c) e) Conjugated acid (free acid not detectable), 10 d exposure, 0.5% v/v soln biologically treated pulp mill effluent Presence of conjugated resin acid suggests significance of hepato-biliary route in excretion of toxicants. Finland GC
FISHES; BILE; INDUSTRIAL POLLUTION; WATER POLLUTION; JUVENILES; RESINS; AQUATIC; DELIBERATE EXPOSURE; FINLAND				
Oikari, A.; Anas, E.; Kruzynski, G.; Holmbom, B. 1984 Bulletin of Environmental Contamination and Toxicology 33:225-240				

Podocarp-8(14)-en-15-oic acid, 13beta-methyl-13-vinyl- (8 CI); 1-Phenanthrenecarboxylic acid, 7-ethenyl-1,2,3,4,4a,4b,5,6,7,9,10,10a-do decahydro-1,4a,7-trimethyl-, (1R-(1alpha,4abeta,4balpha,7alpha,10aalpha))- (9 CI)
471-74-9
C20-H30-O2
Trout, rainbow
SALMO GAIRDNERI

Tissue	Cases Exposure Route	Range	Mean	General Information
4939 Bile	25	a) Not given b) Not given c) Not given d) Not given	a) 2+/-1 ug/mL b) 11.2+/-3.8 ug/mL c) 20 ug/mL	a) Free acid, 3 d exposure, 2.5 mg/L wood rosin b) Conjugated acid (free acid not detectable), 30 d exposure, 1% v/v soln biologically treated pulp mill effluent c) Conjugated acid (free acid not detectable), 10 d exposure, 0.5% v/v soln biologically treated pulp mill effluent Presence of resin acid conjugates suggests significance of hepato-biliary route in excretion of toxicants. Finland GC
FISHES; BILE; INDUSTRIAL POLLUTION; WATER POLLUTION; JUVENILES; RESINS; AQUATIC; DELIBERATE EXPOSURE; FINLAND				
Oikari, A.; Anas, E.; Kruzynski, G.; Holmbom, B. 1984 Bulletin of Environmental Contamination and Toxicology 33:233-240				

Podocarpa-7,13-dien-15-oic acid, 13-isopropyl- (8 CI); 1-Phenanthrenecarboxylic acid, 1,2,3,4,4a,4b,5,6,10,10a-decahydro-1,4a-dimethyl-7-(1-methylethyl-)-, (1R-(1alpha,4abeta,4balpha,10aalpha))- (9 CI)
514-10-3
C20-H30-O2
MW 302.44, MP 172-175 C, BP 250 C
Trout, rainbow
SALMO GAIRDNERI

Tissue	Cases Exposure Route	Range	Mean	General Information
4940 Bile	29	a) Not given b) Not given c) Not given d) Not given e) Not given	a) 27+/-13 ug/mL b) 65 ug/mL c) 0.14+/-0.10 ug/mL d) 53.2+/-9.3 ug/ml: d) 50 ug/mL	a) Free acid, 3 d exposure, 2.5 mg/L wood rosin b) Free acid, 20 d exposure, 2% v/v soln untreated pulp mill effluent c) Free acid, 30 d exposure, 1% v/v soln biologically treated pulp mill effluent d) Conjugated acid, same fish and treatment as (c) e) Conjugated acid (free acid not detectable), 10 d exposure, 0.5% v/v soln biologically treated pulp mill effluent Presence of conjugated resin acid suggests significance of hepato-biliary route in excretion of toxicants. Finland GC
FISHES; BILE; INDUSTRIAL POLLUTION; WATER POLLUTION; JUVENILES; RESINS; AQUATIC; DELIBERATE EXPOSURE; FINLAND				
Oikari, A.; Anas, E.; Kruzynski, G.; Holmbom, B. 1984 Bulletin of Environmental Contamination and Toxicology 33:233-240				

Podocarpa-8,11,13-trien-15-oic acid, 13-isopropyl- (8 CI); 1-Phenanthrenecarboxylic acid, 1,2,3,4,4a,9,10,10a-o ctahydro-1,4a-dimethyl-7-(1-methylethyl)-, (1R-(1alpha,4abeta,10aalpha))- (9 CI)
1740-19-8
C20-H28-O2
Trout, rainbow
SALMO GAIRDNERI

Tissue	Cases Exposure Route	Range	Mean	General Information
4941 Bile	32	a) Not given b) Not given c) 3-56 ug/mL d) 1400-9260 ug/mL e) Not given f) Not given g) Not given h) Not given	a) 7+/-3 ug/mL b) 141 ug/mL c) 22.67 ug/mL d) 5103 ug/mL e) 0.16+/-0.10 ug/mL f) 76.4+/-16.5 ug/mL g) 0.50 ug/mL h) 53 ug/mL	a) Free acid, 3 d exposure, 2.5 mg/L wood resin b) Free acid, 20 d exposure, 2% v/v soln untreated pulp mill effluent c) Free acid, 3 d exposure, 1 mg/L dehydroabietic acid (DHAA) d) Conjugated acid, 3 d exposure, 1 mg/L DHAA e) Free acid, 30 d exposure, 1% v/v soln biologically treated pulp mill effluent f) Conjugated, 30 d exposure, 1% v/v soln biologically treated pulp mill effluent g) Free acid, 10 d exposure, 0.5% v/v soln biologically treated pulp mill effluent h) Conjugated acid, 10 d, 0.5% v/v soln biologically treated pulp mill effluent Presence of resin acid conjugates suggests significance of hepato-biliary route in excretion of toxicants. Finland GC
FISHES; BILE; INDUSTRIAL POLLUTION; WATER POLLUTION; JUVENILES; RESINS; AQUATIC; DELIBERATE EXPOSURE; FINLAND				
Oikari, A.; Anas, E.; Kruzynski, G.; Holmbom, B. 1984 Bulletin of Environmental Contamination and Toxicology 33:233-240				

Polonium, isotope of mass 210
13981-52-7
Po
MW 210, MP 254 C, BP 962 C
Sheep
OVIS sp.

Tissue	Cases Exposure Route	Range	Mean	General Information
4942 Kidney	40 Ingestion	5.4-25 Bq/kg Wet wt	9.00 Bq/kg Wet wt Median	0.5-7.5 yr olds. Naturally occurring and fallout radionuclides. West Germany, Lueneburg heath
4943 Liver	38 Ingestion	0.32-5.3 Bq/kg Wet wt	1.00 Bq/kg Wet wt Median	0.5-7.5 yr olds. Naturally occurring and fallout radionuclides. West Germany, Lueneburg heath
LAND POLLUTION; ENVIRONMENTAL EXPOSURE; AIR POLLUTION; SHEEP; GERMANY; TERRESTRIAL; BIOLOGICAL MONITORING; LIVER; KIDNEYS; MUSCLES; BIOACCUMULATION; BIOCONCENTRATION; JUVENILES; ADULTS; SEX; RADIONUCLIDES; LEAD; CESIUM; POLONIUM; POTASSIUM; FOOD CONTAMINATION; FALL-OUT				
Bunzl, K.; Kracke, W. 1984 Science of the Total Environment 39:143-159				

Polybrominated biphenyls (No postings in CHEMLINE).

Merganser, red-breasted
MERGUS SERRATOR

Tissue	Cases Exposure Route	Range	Mean	General Information
4944 Eggs	a) 40 b) 40	a) Not applicable b) Not applicable	a) 0.05 ppm b) 0.04 ppm Wet wt Geometric means	a) Randomly selected b) Unhatched Collected 1977, pairs from same nests analyzed. No significant difference. Lower limit 0.02 ppm. Lake Michigan, northwestern islands GLC

EGGS; AQUATIC; BIRDS; WATERFOWL; ENVIRONMENTAL EXPOSURE; GREAT LAKES; BROMINATED HYDROCARBONS; CHLORINATED HYDROCARBONS; BROMINE ORGANIC COMPOUNDS; CHLORINE ORGANIC COMPOUNDS; DDE; DDT; DIELDRIN; HEPTACHLOR EPOXIDE; HEXACHLOROBENZENE; INSECTICIDES; MERCURY; NONACHLOR; OXYCHLORDANE; PESTICIDES; POLYBROMINATED BIPHENYLS; POLYCHLORINATED BIPHENYLS; BIOACCUMULATION

Haseltine, S.D.; Heinz, G.H.; Hensler, G.L.; Reichel, W.L. 1983 Environmental Pollution 32:211-232

Polychlorinated dibenzo-p-dioxin (No postings in CHEMLINE).

Carp, common
CYPRINUS CARPIO

Tissue	Cases Exposure Route	Range	Mean	General Information
4945 Body, whole	a) 3 to 5 b) 3 to 5 c) 3 to 5 d) 3 to 5	Not given	a) 50 pg/g b) 385 pg/g c) 111 pg/g d) 228 pg/g Totals, composites	a) Lake Erie, Port Clinton. 60% octa- isomer b) Lake Huron, Saginaw Bay. 41% penta- c) Lake Huron, Bay Port. 28% hepta-, 29% octa- d) Tittabawassee River, MI. 36% tetra- Lake Huron watershed fish high in 2,3,7,8-TCDD. Michigan; Ohio GC-MS

BODY; AQUATIC; FISHES; BIRDS; ENVIRONMENTAL EXPOSURE; GREAT LAKES; CHLORINATED HYDROCARBONS; CHLORINE ORGANIC COMPOUNDS; POLYCHLORINATED BIPHENYLS; AIR POLLUTION; INDUSTRIAL POLLUTION; WATER POLLUTION; POLYCHLORINATED DIBENZOFURANS

Stalling, D.L.; Smith, L.M.; Petty, J.D.; Hogan, J.W.; Johnson, J.L.; Rappe, C.; Buser, H.R. 1983 In: Human and Environmental Risks of Chlorinated Dioxins and Related Compounds, Plenum Publishing Corporation pp. 221-240 (1983)

Gull, herring
LARUS ARGENTATUS

Tissue	Cases Exposure Route	Range	Mean	General Information
4946 Body, whole	a) 1 b) 1	Not given	a) 190 pg/g b) 186 pg/g	a) 80% tetra- b) 47% hexa-, 38% tetra- Isomers detected. Lake Huron, Saginaw Bay GC-MS

BODY; AQUATIC; FISHES; BIRDS; ENVIRONMENTAL EXPOSURE; GREAT LAKES; CHLORINATED HYDROCARBONS; CHLORINE ORGANIC COMPOUNDS; POLYCHLORINATED BIPHENYLS; AIR POLLUTION; INDUSTRIAL POLLUTION; WATER POLLUTION; POLYCHLORINATED DIBENZOFURANS

Stalling, D.L.; Smith, L.M.; Petty, J.D.; Hogan, J.W.; Johnson, J.L.; Rappe, C.; Buser, H.R. 1983 In: Human and Environmental Risks of Chlorinated Dioxins and Related Compounds, Plenum Publishing Corporation pp. 221-240 (1983)

Polychlorinated dibenzo-p-dioxin (No postings in CHEMLINE).

Perch, yellow
PERCA FLAVESCENS

Tissue	Cases Exposure Route	Range	Mean	General Information
4947 Body, whole		Not given	10 pg/g	2,3,7,8-tetra- CDD, dominant isomer. Maine, Woods Pond GC-MS

BODY; AQUATIC; FISHES; BIRDS; ENVIRONMENTAL EXPOSURE; GREAT LAKES; CHLORINATED HYDROCARBONS; CHLORINE ORGANIC COMPOUNDS; POLYCHLORINATED BIPHENYLS; AIR POLLUTION; INDUSTRIAL POLLUTION; WATER POLLUTION; POLYCHLORINATED DIBENZOFURANS

Stalling, D.L.; Smith, L.M.; Petty, J.D.; Hogan, J.W.; Johnson, J.L.; Rappe, C.; Buser, H.R. 1983 In: Human and Environmental Risks of Chlorinated Dioxins and Related Compounds, Plenum Publishing Corporation pp. 221-240 (1983)

Trout, brown
SALMO TRUTTA

Tissue	Cases Exposure Route	Range	Mean	General Information
4948 Body, whole	3 to 5	Not given	33 pg/g Total, composite	100% tetra- isomers. Lake Ontario, Roosevelt Beach GC-MS

BODY; AQUATIC; FISHES; BIRDS; ENVIRONMENTAL EXPOSURE; GREAT LAKES; CHLORINATED HYDROCARBONS; CHLORINE ORGANIC COMPOUNDS; POLYCHLORINATED BIPHENYLS; AIR POLLUTION; INDUSTRIAL POLLUTION; WATER POLLUTION; POLYCHLORINATED DIBENZOFURANS

Stalling, D.L.; Smith, L.M.; Petty, J.D.; Hogan, J.W.; Johnson, J.L.; Rappe, C.; Buser, H.R. 1983 In: Human and Environmental Risks of Chlorinated Dioxins and Related Compounds, Plenum Publishing Corporation pp. 221-240 (1983)

Trout, lake
SALVELINUS NAMAYCUSH

Tissue	Cases Exposure Route	Range	Mean	General Information
4949 Body, whole	a) 3 to 5 b) 3 to 5	Not given	a) 5 pg/g b) Trace Totals, composites	a) Lake Michigan, Saugatuck b) Lake Siskiwit, Isle Royale, MI. Michigan GC-MS

BODY; AQUATIC; FISHES; BIRDS; ENVIRONMENTAL EXPOSURE; GREAT LAKES; CHLORINATED HYDROCARBONS; CHLORINE ORGANIC COMPOUNDS; POLYCHLORINATED BIPHENYLS; AIR POLLUTION; INDUSTRIAL POLLUTION; WATER POLLUTION; POLYCHLORINATED DIBENZOFURANS

Stalling, D.L.; Smith, L.M.; Petty, J.D.; Hogan, J.W.; Johnson, J.L.; Rappe, C.; Buser, H.R. 1983 In: Human and Environmental Risks of Chlorinated Dioxins and Related Compounds, Plenum Publishing Corporation pp. 221-240 (1983)

Polychlorinated dibenzofurans (No postings in CHEMLINE).

Bloater
COREGONUS HOYI

Tissue	Cases Exposure Route	Range	Mean	General Information
4950 Body, whole	3 to 5	Not given	40 pg/g Total, composite	65% tetra- isomers, 23% penta-. Lake Superior, Keweenaw Bay GC-MS
BODY; AQUATIC; FISHES; BIRDS; ENVIRONMENTAL EXPOSURE; GREAT LAKES; CHLORINATED HYDROCARBONS; CHLORINE ORGANIC COMPOUNDS; POLYCHLORINATED BIPHENYLS; AIR POLLUTION; INDUSTRIAL POLLUTION; WATER POLLUTION; POLYCHLORINATED DIBENZOFURANS				
Stalling, D.L.; Smith, L.M.; Petty, J.D.; Hogan, J.W.; Johnson, J.L.; Rappe, C.; Buser, H.R. 1983 In: Human and Environmental Risks of Chlorinated Dioxins and Related Compounds, Plenum Publishing Corporation pp. 221-240 (1983)				

Carp, common
CYPRINUS CARPIO

Tissue	Cases Exposure Route	Range	Mean	General Information
4951 Body, whole	a) 3 to 5 b) 3 to 5 c) 3 to 5 d) 3 to 5	Not given	a) 18 pg/g b) 153 pg/g c) 29 pg/g d) 290 pg/g Totals, composites	a) Lake Erie, Port Clinton. Tetra- and penta- isomers, 28% each b) Lake Huron, Saginaw Bay. Penta- and hepta-, 29% each c) Lake Huron, Bay Port. Penta-, 41% d) Tittabawassee River, Midland, MI. Hexa-, 50% Michigan; Ohio GC-MS
BODY; AQUATIC; FISHES; BIRDS; ENVIRONMENTAL EXPOSURE; GREAT LAKES; CHLORINATED HYDROCARBONS; CHLORINE ORGANIC COMPOUNDS; POLYCHLORINATED BIPHENYLS; AIR POLLUTION; INDUSTRIAL POLLUTION; WATER POLLUTION; POLYCHLORINATED DIBENZOFURANS				
Stalling, D.L.; Smith, L.M.; Petty, J.D.; Hogan, J.W.; Johnson, J.L.; Rappe, C.; Buser, H.R. 1983 In: Human and Environmental Risks of Chlorinated Dioxins and Related Compounds, Plenum Publishing Corporation pp. 221-240 (1983)				

Gull, herring
LARUS ARGENTATUS

Tissue	Cases Exposure Route	Range	Mean	General Information
4952 Body, whole	a) 1 b) 1	Not given	a) 121 pg/g b) 117 pg/g	a) 47% hexa- isomer b) 43% penta-, 34% hexa- isomers. Lake Huron, Saginaw Bay GC-MS
BODY; AQUATIC; FISHES; BIRDS; ENVIRONMENTAL EXPOSURE; GREAT LAKES; CHLORINATED HYDROCARBONS; CHLORINE ORGANIC COMPOUNDS; POLYCHLORINATED BIPHENYLS; AIR POLLUTION; INDUSTRIAL POLLUTION; WATER POLLUTION; POLYCHLORINATED DIBENZOFURANS				
Stalling, D.L.; Smith, L.M.; Petty, J.D.; Hogan, J.W.; Johnson, J.L.; Rappe, C.; Buser, H.R. 1983 In: Human and Environmental Risks of Chlorinated Dioxins and Related Compounds, Plenum Publishing Corporation pp. 221-240 (1983)				

Polychlorinated dibensofurans (No postings in CHEMLINE).

Perch, yellow
PERCA FLAVESCENS

Tissue	Cases Exposure Route	Range	Mean	General Information
4953 Body, whole		Not given	a) 1.06 pg/g b) 0.64 pg/g c) 0.44 pg/g d) 0.0004 pg/g e) 0.001 pg/g Totals, composites.	a) Tetra- b) Penta- c) Hexa- d) Hepta- e) Octa- Isomers detected. Maine, Woods Pond GC-MS

BODY; AQUATIC; FISHES; BIRDS; ENVIRONMENTAL EXPOSURE; GREAT LAKES; CHLORINATED HYDROCARBONS; CHLORINE ORGANIC COMPOUNDS; POLYCHLORINATED BIPHENYLS; AIR POLLUTION; INDUSTRIAL POLLUTION; WATER POLLUTION; POLYCHLORINATED DIBENZOFURANS

Stalling, D.L.; Smith, L.M.; Petty, J.D.; Hogan, J.W.; Johnson, J.L.; Rappe, C.; Buser, H.R. 1983 In: Human and Environmental Risks of Chlorinated Dioxins and Related Compounds, Plenum Publishing Corporation pp. 221-240 (1983)

Trout, brook
SALVELINUS FONTINALIS

Tissue	Cases Exposure Route	Range	Mean	General Information
4954 Body, whole	3 to 5	Not given	32 pg/g Total, composite	50% is tetra- isomer. Lake Ontario, Roosevelt Beach GC-MS

BODY; AQUATIC; FISHES; BIRDS; ENVIRONMENTAL EXPOSURE; GREAT LAKES; CHLORINATED HYDROCARBONS; CHLORINE ORGANIC COMPOUNDS; POLYCHLORINATED BIPHENYLS; AIR POLLUTION; INDUSTRIAL POLLUTION; WATER POLLUTION; POLYCHLORINATED DIBENZOFURANS

Stalling, D.L.; Smith, L.M.; Petty, J.D.; Hogan, J.W.; Johnson, J.L.; Rappe, C.; Buser, H.R. 1983 In: Human and Environmental Risks of Chlorinated Dioxins and Related Compounds, Plenum Publishing Corporation pp. 221-240 (1983)

Trout, lake
SALVELINUS NAMAYCUSH

Tissue	Cases Exposure Route	Range	Mean	General Information
4955 Body, whole	a) 3 to 5 b) 3 to 5 c) 3 to 5 d) 3 to 5 e) 3 to 5	a) Not given b) Not given c) Not given d) Not given e) 70-91 pg/g	a) 15 pg/g b) 36 pg/g c) 119 pg/g d) 86 and 110 pg/g e) 81 pg/g Totals, composites	a) Lake Siskiwit, Isle Royale, MI. 67% of PCDF was tetra- isomer b) Lake Superior, Apostle Islands. 53% was tetra- isomer c) Lake Ontario, Orwego, NY. 29% tetra-, 40% penta-, 24% hexa- isomers d) Lake Michigan, Saugatuck. penta-, 48 and 55%, respectively e) Lake Huron, Rockport, MI. 32% tetra- and 35% penta-. Michigan; New York GC-MS

BODY; AQUATIC; FISHES; BIRDS; ENVIRONMENTAL EXPOSURE; GREAT LAKES; CHLORINATED HYDROCARBONS; CHLORINE ORGANIC COMPOUNDS; POLYCHLORINATED BIPHENYLS; AIR POLLUTION; INDUSTRIAL POLLUTION; WATER POLLUTION; POLYCHLORINATED DIBENZOFURANS

Stalling, D.L.; Smith, L.M.; Petty, J.D.; Hogan, J.W.; Johnson, J.L.; Rappe, C.; Buser, H.R. 1983 In: Human and Environmental Risks of Chlorinated Dioxins and Related Compounds, Plenum Publishing Corporation pp. 221-240 (1983)

Polychlorinated dibenzofurans (No postings in CHEMLINE).

Walleye
STIZOSTEDION VITREUM VITREUM

Tissue	Cases Exposure Route	Range	Mean	General Information
4956 Body, whole	a) 3 to 5 b) 3 to 5	Not given	a) 40 pg/g b) 12 pg/g Totals, composites	a) Lake Erie, Cedar Point, OH. 45% is tetra- isomer b) Lake St. Clair, Anchor Bay, MI. Tetra- and penta- isomers, 38% each. Lowest PCDF level in study. Ohio; Michigan GC-MS

BODY; AQUATIC; FISHES; BIRDS; ENVIRONMENTAL EXPOSURE; GREAT LAKES; CHLORINATED HYDROCARBONS; CHLORINE ORGANIC COMPOUNDS; POLYCHLORINATED BIPHENYLS; AIR POLLUTION; INDUSTRIAL POLLUTION; WATER POLLUTION; POLYCHLORINATED DIBENZOFURANS
Stalling, D.L.; Smith, L.M.; Petty, J.D.; Hogan, J.W.; Johnson, J.L.; Rappe, C.; Buser, H.R. 1983 In: Human and Environmental Risks of Chlorinated Dioxins and Related Compounds, Plenum Publishing Corporation pp. 221-240 (1983)

Polychlorinated naphthalenes (No postings in CHEMLINE).

Char
SALVELINUS ALFINUS

Tissue	Cases Exposure Route	Range	Mean	General Information
4957 Muscle	Ingestion	a) Not given b) Not given	a) 0.05 ng/g b) 3.0 ng/g	a) Fresh tissue b) Lipid fraction Sampled 1982, Lake Tjultrasket. Sweden Carbon chromatog; GC/MS; Chem ionisation

CHLORINE ORGANIC COMPOUNDS; SWEDEN; BIOLOGICAL MONITORING; WATER POLLUTION; INDUSTRIAL POLLUTION; AQUATIC; MUSCLES; ADIPOSE TISSUE; LIVER; ENVIRONMENTAL EXPOSURE; FISHES; MEASUREMENT METHODS; AIR POLLUTION; SEALS; BIOMAGNIFICATION
Jansson, B.; Asplund, L.; Olsson, M. 1984 Chemosphere 13(1):33-41

Cod
GADUS MORRHUA

Tissue	Cases Exposure Route	Range	Mean	General Information
4958 Liver	Ingestion Inhalation Dermal	a) Not given b) Not given	a) 32 ng/g b) 62 ng/g	a) Fresh tissue b) Lipid fraction Sampled 1982, Suartloga, Aland Sea. Affected by industry and urbanisation, 65 km from Stockholm. No biomagnification. Sweden Carbon chromatog; GC/MS; Chemical ionisation

CHLORINE ORGANIC COMPOUNDS; SWEDEN; BIOLOGICAL MONITORING; WATER POLLUTION; INDUSTRIAL POLLUTION; AQUATIC; MUSCLES; ADIPOSE TISSUE; LIVER; ENVIRONMENTAL EXPOSURE; FISHES; MEASUREMENT METHODS; AIR POLLUTION; SEALS; BIOMAGNIFICATION
Jansson, B.; Asplund, L.; Olsson, M. 1984 Chemosphere 13(1):33-41

Polychlorinated naphthalenes (No postings in CHEMLINE).

Eagle, sea
HALIAEETUS ALBICILLA

Tissue	Cases Exposure Route	Range	Mean	General Information
4959 Muscle	Ingestion immersion	a) Not given b) Not given	a) 5.9 ng/g b) 39 ng/g	a) Fresh tissue b) Lipid fraction Sampled 1982, Oregrund Sea. No biomagnification. Sweden Carbon chromatog; GC/MS; Chemical ionization
CHLORINE ORGANIC COMPOUNDS; SWEDEN; BIOLOGICAL MONITORING; WATER POLLUTION; INDUSTRIAL POLLUTION; AQUATIC; MUSCLES; ADIPOSE TISSUE; LIVER; ENVIRONMENTAL EXPOSURE; FISHES; MEASUREMENT METHODS; AIR POLLUTION; SEALS; BIOMAGNIFICATION Jansson, B.; Asplund, L.; Olsson, M. 1984 Chemosphere 13(1):33-41				

Lamprey
LAMPETRA FLUVIATALIS

Tissue	Cases Exposure Route	Range	Mean	General Information
4960 Muscle	Ingestion Inhalation Dermal	a) Not given b) Not given	a) 2.6 ng/g b) [illegible].0 ng/g	a) Fresh tissue b) Lipid fraction Sampled 1974, Lake Dalalven. Polluted by industrial discharges. No biomagnification. Sweden Carbon chromatog; GC/MS; Chemical ionization
CHLORINE ORGANIC COMPOUNDS; SWEDEN; BIOLOGICAL MONITORING; WATER POLLUTION; INDUSTRIAL POLLUTION; AQUATIC; MUSCLES; ADIPOSE TISSUE; LIVER; ENVIRONMENTAL EXPOSURE; FISHES; MEASUREMENT METHODS; AIR POLLUTION; SEALS; BIOMAGNIFICATION Jansson, B.; Asplund, L.; Olsson, M. 1984 Chemosphere 13(1):33-41				

Pike
ESOX LUCIUS

Tissue	Cases Exposure Route	Range	Mean	General Information
4961 Liver	Ingestion immersion	a) Not given b) Not given	a) 4.2 ng/g b) 29 ng/g	a) Fresh tissue b) Lipid fraction Sampled 1982, Lake Storsjon. Polluted by industrial discharges. No biomagnification. Sweden Carbon chromatog; GC/MS; Chem ionization
4962 Muscle	Ingestion Inhalation Dermal	a) Not given b) Not given	a) 0.07 ng/g b) 13 ng/g	a) Fresh tissue b) Lipid fraction Sampled 1982, Lake Storsjon. Polluted by industrial discharges. No biomagnification. Sweden Carbon chromatog; GC/MS; Chem ionization
CHLORINE ORGANIC COMPOUNDS; SWEDEN; BIOLOGICAL MONITORING; WATER POLLUTION; INDUSTRIAL POLLUTION; AQUATIC; MUSCLES; ADIPOSE TISSUE; LIVER; ENVIRONMENTAL EXPOSURE; FISHES; MEASUREMENT METHODS; AIR POLLUTION; SEALS; BIOMAGNIFICATION Jansson, B.; Asplund, L.; Olsson, M. 1984 Chemosphere 13(1):33-41				

Polychlorinated naphthalenes (No postings in CHEMLINE).

Salmon
SALMO SALAR

Tissue	Cases Exposure Route	Range	Mean	General Information
4963 Muscle	Ingestion Inhalation Dermal	a) Not given b) Not given	a) 5.1 ng/g b) 35 ng/g	a) Fresh tissue b) Lipid fraction Sampled 1979, Gotland, Baltic Sea. No biomagnification. Sweden Carbon chromatog; GC/MS; Chemical ionization

CHLORINE ORGANIC COMPOUNDS; SWEDEN; BIOLOGICAL MONITORING; WATER POLLUTION; INDUSTRIAL POLLUTION; AQUATIC; MUSCLES; ADIPOSE TISSUE; LIVER; ENVIRONMENTAL EXPOSURE; FISHES; MEASUREMENT METHODS; AIR POLLUTION; SEALS; BIOMAGNIFICATION

Jansson, B.; Asplund, L.; Olsson, M. 1984 Chemosphere 13(1):33-41

Seal
HALICHOERUS

Tissue	Cases Exposure Route	Range	Mean	General Information
4964 Adipose	Ingestion Immersion	Not given	15 ng/g	Sampled 1940-1945, Baltic Sea. Lipid fraction. No biomagnification. Sweden Carbon chromatography; GC/MC; Chemical ionization

CHLORINE ORGANIC COMPOUNDS; SWEDEN; BIOLOGICAL MONITORING; WATER POLLUTION; INDUSTRIAL POLLUTION; AQUATIC; MUSCLES; ADIPOSE TISSUE; LIVER; ENVIRONMENTAL EXPOSURE; FISHES; MEASUREMENT METHODS; AIR POLLUTION; SEALS; BIOMAGNIFICATION

Jansson, B.; Asplund, L.; Olsson, M. 1984 Chemosphere 13(1):33-41

Seal, gray
HALICHOERUS GRYPHUS

Tissue	Cases Exposure Route	Range	Mean	General Information
4965 Adipose	Ingestion Immersion	a) Not given b) Not given	a) 13 ng/g b) 20 ng/g	a) Fresh tissue b) Lipid fraction Sampled 1978, Vaddo, Aland Sea. No biomagnification. Sweden Carbon chromatog; GC/MS; Chemical ionization

CHLORINE ORGANIC COMPOUNDS; SWEDEN; BIOLOGICAL MONITORING; WATER POLLUTION; INDUSTRIAL POLLUTION; AQUATIC; MUSCLES; ADIPOSE TISSUE; LIVER; ENVIRONMENTAL EXPOSURE; FISHES; MEASUREMENT METHODS; AIR POLLUTION; SEALS; BIOMAGNIFICATION

Jansson, B.; Asplund, L.; Olsson, M. 1984 Chemosphere 13(1):33-41

Polychloro-2-(chloromethylsulphonamido)-diphenyl ether (No postings in CHEMLINE).

Pike, northern
ESOX LUCIUS

Tissue	Cases Exposure Route	Range	Mean	General Information
4966 Adipose	a) 1 b) 1 c) 1 d) 1 e) 1 f) 1 g) 1 h) 1 Ingestion	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given g) Not given h) Not given	a) 0.166 ug/g b) 0.618 ug/g c) 0.055 ug/g d) 1.543 ug/g e) 0.297 ug/g f) 0.571 ug/g g) 0.324 ug/g h) 1.182 ug/g	a) Intestine fat, 7 hr after start of dosing, ingested 3 fry b) 24 hr, ingested 3 fry c) 77 hr, ingested 7 fry d) 221 hr, ingested 15 fry e) Stomach fat 7 hr, ingested 3 fry f) 24 hr, ingested 3 fry g) 77 hr, ingested 7 fry h) 221 hr, ingested 15 fry Salmon fry exposed to 50 ug/l Eulan WA New (mothproofing agent) for 2 hr and fed immediately to pike that were sexually immature, 19.5-28.0 cm and 57-96 g. Scotland, Loch Faskally (Pitlochry) GLC
4967 Bile	1 Ingestion	Not given	20.016 ug/g	221 hr after start of dosing, ingested 15 fry Salmon fry exposed to 50 ug/l Eulan WA New for 2 hr and fed immediately to pike that were sexually immature, 19.5-28 cm, 57-96 g. Scotland, Loch Faskally (Pitlochry) GLC

MUSCLES; LIVER; KIDNEYS; SPLEEN; BILE; EYE; GILLS; BLOOD; ESOPHAGUS; INTESTINES; STOMACH; ADIPOSE TISSUE; SKIN; BRAIN; FISHES; AQUATIC; DELIBERATE EXPOSURE; SCOTLAND; JUVENILES

Machon, A.; North, M.J.; Price, N.C.; Wells, D.E. 1984 Environmental Pollution (Series A-Environmental and Biological) 33:295-302

Tissue	Cases Exposure Route	Range	Mean	General Information
4968 Bile	a) 1 b) 1 c) 1 d) 1 e) 1 f) 1	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given	a) 66.00 ug/g b) 19.847 ug/g c) 0.283 ug/g d) 19.370 ug/g d) 0.064 ug/g f) 1.807 ug/g	a) 4 hr exposure b) 8 hr c) 14 hr d) 26 hr e) 50 hr f) 240 hr 5 ug/l Eulan WA New. 60-80 g, sexually immature, 23-31 cm long. Additional data given. Scotland, Loch Faskally GLC
4969 Blood	a) 1 b) 1 c) 1 d) 1 e) 1 f) 1	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given	a) 0.289 ug/g b) 1.34 ug/g c) 1.22 ug/g d) 2.092 ug/g e) 1.212 ug/g f) 2.446 ug/g	a) 4 hr exposure b) 8 hr c) 14 hr d) 26 hr e) 50 hr f) 240 hr 5 ug/l Eulan WA New. 60-80 g, sexually immature, 23-31 cm long. Additional data given. Scotland, Loch Faskally GLC

ESOPHAGUS; STOMACH; INTESTINES; SPLEEN; LIVER; BILE; KIDNEYS; GILLS; EYE; BRAIN; MUSCLES; BLOOD; SKIN; AQUATIC; FISHES; DELIBERATE EXPOSURE; SCOTLAND; JUVENILES

Machon, A.; North, M.J.; Price, N.C.; Wells, D.E. 1984 Environmental Pollution (Series A-Environmental and Biological) 33:275-289

Polychloro-2-(chloromethylsulphonamido)-diphenyl ether (No postings in CHEMLINE).

Pike, northern
ESOX LUCIUS

Tissue	Cases Exposure Route	Range	Mean	General Information
4970 Blood	a) 1 b) 1 c) 1 d) 1 Ingestion	a) Not given b) Not given c) Not given d) Not given	a) 0.215 ug/g b) 0.861 ug/g c) 0.196 ug/g d) 0.278 ug/g	a) 7 hr after start of dosing, ingested 3 fry b) 24 hr, 3 fry c) 77 hr, 7 fry d) 221 hr, 15 fry Salmon fry exposed to 50 ug/l Eulan WA New for 2 hr and fed immediately to pike that were sexually immature, 19.5-23.0 cm, 57-96 g. Scotland, Loch Pashally (Pitlochry) GLC
MUSCLES; LIVER; KIDNEYS; SPLEEN; BILE; EYE; GILLS; BLOOD; ESOPHAGUS; INTESTINES; STOMACH; ADIPOSE TISSUE; SKIN; BRAIN; FISHES; AQUATIC; DELIBERATE EXPOSURE; SCOTLAND; JUVENILES Machon, A.; North, M.J.; Price, N.C.; Wells, D.E. 1984 Environmental Pollution (Series A-Environmental and Biological) 33:295-302				

Tissue	Cases Exposure Route	Range	Mean	General Information
4971 Brain	a) 1 b) 1 c) 1 d) 1 e) 1 f) 1	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given	a) 2.193 ug/g b) 3.196 ug/g c) 1.057 ug/g d) 1.692 ug/g e) 0.077 ug/g f) 3.050 ug/g	a) 4 hr exposure b) 8 hr c) 14 hr d) 26 hr e) 50 hr f) 240 hr 5 ug/l Eulan WA New. 60-80 g, sexually immature, 23-31 cm long. Scotland, Loch Pashally GLC
ESOPHAGUS; STOMACH; INTESTINES; SPLEEN; LIVER; BILE; KIDNEYS; GILLS; EYE; BRAIN; MUSCLES; BLOOD; SKIN; AQUATIC; FISHES; DELIBERATE EXPOSURE; SCOTLAND; JUVENILES Machon, A.; North, M.J.; Price, N.C.; Wells, D.E. 1984 Environmental Pollution (Series A-Environmental and Biological) 33:275-289				

Tissue	Cases Exposure Route	Range	Mean	General Information
4972 Brain	a) 1 b) 1 Ingestion	a) Not given b) Not given	a) 0.285 ug/g b) 0.411 ug/g	a) 7 hr after start of dosing, ingested 3 fry b) 221 hr, 15 fry Salmon fry exposed to 50 ug/l Eulan WA New for 2 hr and fed immediately to pike that were sexually immature, 19.5-23 cm, 57-96 g. Scotland, Loch Pashally (Pitlochry) GLC
MUSCLES; LIVER; KIDNEYS; SPLEEN; BILE; EYE; GILLS; BLOOD; ESOPHAGUS; INTESTINES; STOMACH; ADIPOSE TISSUE; SKIN; BRAIN; FISHES; AQUATIC; DELIBERATE EXPOSURE; SCOTLAND; JUVENILES Machon, A.; North, M.J.; Price, N.C.; Wells, D.E. 1984 Environmental Pollution (Series A-Environmental and Biological) 33:295-302				

Polychloro-2-(chloromethylsulphonamido)-diphenyl ether (No postings in CHEMLINE).

Pike, northern
ESOX LUCIUS

Tissue	Cases Exposure Route	Range	Mean	General Information
4973 Esophagus	a) 1 b) 1 c) 1 d) 1 e) 1 f) 1	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given	a) 0.165 ug/g b) 0.679 ug/g c) 0.33 ug/g d) 0.082 ug/g e) 0.104 ug/g f) 1.425 ug/g	a) 4 hr exposure b) 8 hr c) 14 hr d) 26 hr e) 50 hr f) 240 hr 5 ug/l Eulan WA New. 60-80 g, sexually immature, 23-31 cm long. Scotland, Loch Faskally GLC

ESOPHAGUS; STOMACH; INTESTINES; SPLEEN; LIVER; BILE; KIDNEYS; GILLS; EYE; BRAIN; MUSCLES; BLOOD; SKIN; AQUATIC; FISHES; DELIBERATE EXPOSURE; SCOTLAND; JUVENILES

Machon, A.; North, M.J.; Price, N.C.; Wells, D.E. 1984 Environmental Pollution (Series A-Environmental and Biological) 33:275-289

Tissue	Cases Exposure Route	Range	Mean	General Information
4974 Esophagus	a) 1 b) 1 c) 1 Ingestion	a) Not given b) Not given c) Not given	a) 0.286 ug/g b) 0.480 ug/g c) 1.947 ug/g	a) 7 hr after start of dosing, ingested 3 fry b) 24 hr, 3 fry c) 221 hr, 15 fry Salmon fry exposed to 50 ug/l Eulan WA New for 2 hr and fed immediately to pike that were sexually immature, 19.5-23.0 cm, 57-96 g. Scotland, Loch Faskally (Pitlochry) GLC

MUSCLES; LIVER; KIDNEYS; SPLEEN; BILE; EYE; GILLS; BLOOD; ESOPHAGUS; INTESTINES; STOMACH; ADIPOSE TISSUE; SKIN; BRAIN; FISHES; AQUATIC; DELIBERATE EXPOSURE; SCOTLAND; JUVENILES

Machon, A.; North, M.J.; Price, N.C.; Wells, D.E. 1984 Environmental Pollution (Series A-Environmental and Biological) 33:295-302

Tissue	Cases Exposure Route	Range	Mean	General Information
4975 Eye	a) 1 b) 1 c) 1 d) 1 e) 1 f) 1	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given	a) 0.338 ug/g b) 1.566 ug/g c) 0.298 ug/g d) 0.246 ug/g e) 0.481 ug/g f) 0.798 ug/g	a) 4 hr exposure b) 8 hr c) 14 hr d) 26 hr e) 50 hr f) 240 hr 5 ug/l Eulan WA New. 60-80 g, sexually immature, 23-31 cm long. Scotland, Loch Faskally GLC

ESOPHAGUS; STOMACH; INTESTINES; SPLEEN; LIVER; BILE; KIDNEYS; GILLS; EYE; BRAIN; MUSCLES; BLOOD; SKIN; AQUATIC; FISHES; DELIBERATE EXPOSURE; SCOTLAND; JUVENILES

Machon, A.; North, M.J.; Price, N.C.; Wells, D.E. 1984 Environmental Pollution (Series A-Environmental and Biological) 33:275-289

Polychloro-2-(chloromethylsulphonamido)-diphenyl ether (No postings in CHEMLINE).

Pike, northern
ESOX LUCIUS

Tissue	Cases Exposure Route	Range	Mean	General Information
4976 Eye	a) 1 b) 1 c) 1 d) 1 Ingestion	a) Not given b) Not given c) Not given d) Not given	a) 0.052 ug/g b) 0.183 ug/g c) 0.041 ug/g d) 0.074 ug/g	a) 7 hr after start of dosing, ingested 3 fry b) 24 hr, 3 fry c) 77 hr, 7 fry d) 221 hr, 15 fry Salmon fry exposed to 50 ug/l Eulan WA New for 2 hr and fed immediately to pike that were sexually immature, 19.5-23.0 cm, 57-96 g. Scotland, Loch Faskally (Pitlochry) GLC

MUSCLES; LIVER; KIDNEYS; SPLEEN; BILE; EYE; GILLS; BLOOD; ESOPHAGUS; INTESTINES; STOMACH; ADIPOSE TISSUE; SKIN; BRAIN; FISHES; AQUATIC; DELIBERATE EXPOSURE; SCOTLAND; JUVENILES

Machon, A.; North, M.J.; Price, N.C.; Wells, D.E. 1984 Environmental Pollution (Series A-Environmental and Biological) 33:295-302

Tissue	Cases Exposure Route	Range	Mean	General Information
4977 Gills	a) 1 b) 1 c) 1 d) 1 e) 1 f) 1	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given	a) <0.01 ug/g b) 0.981 ug/g c) 0.510 ug/g d) 0.510 ug/g e) 0.777 ug/g f) 0.01 ug/g	a) 4 hr exposure b) 6 hr c) 14 hr d) 26 hr e) 50 hr f) 240 hr 5 ug/l Eulan WA New. 60-80 g, sexually immature, 23-31 cm long. Additional data given. Scotland, Loch Faskally GLC

ESOPHAGUS; STOMACH; INTESTINES; SPLEEN; LIVER; BILE; KIDNEYS; GILLS; EYE; BRAIN; MUSCLES; BLOOD; SKIN; AQUATIC; FISHES; DELIBERATE EXPOSURE; SCOTLAND; JUVENILES

Machon, A.; North, M.J.; Price, N.C.; Wells, D.E. 1984 Environmental Pollution (Series A-Environmental and Biological) 33:275-289

Tissue	Cases Exposure Route	Range	Mean	General Information
4978 Gills	a) 1 b) 1 c) 1 Ingestion	a) Not given b) Not given c) Not given	a) 0.121 ug/g b) 0.076 ug/g c) 0.166 ug/g	a) 7 hr after start of dosing, ingested 3 fry b) 72 hr, 7 fry c) 221 hr, 15 fry Salmon fry exposed to 50 ug/l Eulan WA New for 2 hr and fed immediately to pike that were sexually immature, 19.5-23 cm, 57-96 g. Scotland, Loch Faskally (Pitlochry) GLC

MUSCLES; LIVER; KIDNEYS; SPLEEN; BILE; EYE; GILLS, BLOOD; ESOPHAGUS; INTESTINES; STOMACH; ADIPOSE TISSUE; SKIN; BRAIN; FISHES; AQUATIC; DELIBERATE EXPOSURE; SCOTLAND; JUVENILES

Machon, A.; North, M.J.; Price, N.C.; Wells, D.E. 1984 Environmental Pollution (Series A-Environmental and Biological) 33:295-302

Polychloro-2-(chloromethylsulphonamido)-diphenyl ether (No postings in CHEMLINE).

Pike, northern
ESOX LUCIUS

Tissue	Cases Exposure Route	Range	Mean	General Information
4979 Intestine	a) 1 b) 1 c) 1 d) 1 e) 1 f) 1	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given	a) 0.046 ug/g b) 0.501 ug/g c) 0.209 ug/g d) 0.499 ug/g e) 0.266 ug/g f) 0.485 ug/g	a) 4 hr exposure b) 8 hr c) 14 hr d) 26 hr e) 50 hr f) 240 hr 5 ug/l Eulan WA New. 60-80 g, sexually immature, 23-31 cm long. Additional data given. Scotland, Loch Faskally GLC

ESOPHAGUS; STOMACH; INTESTINES; SPLEEN, LIVER; BILE; KIDNEYS; GILLS; EYE; BRAIN; MUSCLES; BLOOD; SKIN; AQUATIC; FISHES; DELIBERATE EXPOSURE; SCOTLAND; JUVENILES
Machon, A.; North, M.J.; Price, N.C.; Wells, D.E. 1984 Environmental Pollution (Series A-Environmental and Biological) 33:275-289

Tissue	Cases Exposure Route	Range	Mean	General Information
4980 Intestine	a) 1 b) 1 c) 1 d) 1 Ingestion	a) Not given b) Not given c) Not given d) Not given	a) 0.063 ug/g b) 0.206 ug/g c) 0.135 ug/g d) 0.635 ug/g	a) 7 hr after start of dosing, ingested 3 fry b) 24 hr, 8 fry c) 77 hr, 7 fry d) 221 hr, 15 fry Salmon fry exposed to 50 ug/l Eulan WA New for 2 hr and fed immediately to pike that were sexually immature, 19.5-23.0 cm, 57-96 g. Scotland, Loch Faskally (Pitlochry) GLC

MUSCLES; LIVER; KIDNEYS; SPLEEN; BILE; EYE; GILLS; BLOOD; ESOPHAGUS; INTESTINES; STOMACH; ADIPOSE TISSUE; SKIN; BRAIN; FISHES; AQUATIC; DELIBERATE EXPOSURE; SCOTLAND; JUVENILES
Machon, A.; North, M.J.; Price, N.C.; Wells, D.E. 1984 Environmental Pollution (Series A-Environmental and Biological) 33:295-302

Tissue	Cases Exposure Route	Range	Mean	General Information
4981 Kidney	a) 1 b) 1 c) 1 d) 1 e) 1 f) 1	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given	a) 0.335 ug/g b) 1.807 ug/g c) 0.671 ug/g d) 1.015 ug/g e) <0.01 ug/g f) 2.923 ug/g	a) 4 hr exposure b) 8 hr c) 14 hr d) 26 hr e) 50 hr f) 240 hr 5 ug/l Eulan WA New. 60-80 g, sexually immature, 23-31 cm long. Additional data given. Scotland, Loch Faskally GLC

ESOPHAGUS; STOMACH; INTESTINES; SPLEEN; LIVER; BILE; KIDNEYS; GILLS; EYE; BRAIN; MUSCLES; BLOOD; SKIN; AQUATIC; FISHES; DELIBERATE EXPOSURE; SCOTLAND; JUVENILES
Machon, A.; North, M.J.; Price, N.C.; Wells, D.E. 1984 Environmental Pollution (Series A-Environmental and Biological) 33:275-289

Polychloro-2-(chloromethylsulphonamido)-diphenyl ether (No postings in CHEMLINE).

Pike, northern
ESOX LUCIUS

Tissue	Cases Exposure Route	Range	Mean	General Information
4962 Kidney	a) 1 b) 1 c) 1 d) 1 Ingestion	a) Not given b) Not given c) Not given d) Not given	a) 0.120 ug/g b) 0.130 ug/g c) 0.307 ug/g d) 0.802 ug/g	a) 7 hr after start of dosing, ingested 3 fry b) 24 hr, 3 fry c) 77 hr, 7 fry d) 221 hr, 15 fry Salmon fry exposed to 50 ug/l Eulan WA New for 2 hr and fed immediately to pike that were sexually immature, 19.5-28.0 cm, 57-96 g. Scotland, Loch Faskally (Pitlochry) GLC

MUSCLES; LIVER; KIDNEYS; SPLEEN; BILE; EYE; GILLS; BLOOD; ESOPHAGUS; INTESTINES; STOMACH; ADIPOSE TISSUE; SKIN; BRAIN; FISHES; AQUATIC; DELIBERATE EXPOSURE; SCOTLAND; JUVENILES

Machon, A.; North, M.J.; Price, N.C.; Wells, D.E. 1984 Environmental Pollution (Series A-Environmental and Biological) 33:295-302

Tissue	Cases Exposure Route	Range	Mean	General Information
4963 Liver	a) 1 b) 1 c) 1 d) 1 e) 1 f) 1	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given	a) 0.168 ug/g b) 0.283 ug/g c) 0.443 ug/g d) 0.197 ug/g e) 0.336 ug/g f) 0.750 ug/g	a) 4 hr exposure b) 8 hr c) 14 hr d) 26 hr e) 50 hr f) 240 hr 5 ug/l Eulan WA New. 60-80 g, sexually immature, 23-31 cm long. Additional data given. Scotland, Loch Faskally GLC

ESOPHAGUS; STOMACH; INTESTINES; SPLEEN; LIVER; BILE; KIDNEYS; GILLS; EYE; BRAIN; MUSCLES; BLOOD; SKIN; AQUATIC; FISHES; DELIBERATE EXPOSURE; SCOTLAND; JUVENILES

Machon, A.; North, M.J.; Price, N.C.; Wells, D.E. 1984 Environmental Pollution (Series A-Environmental and Biological) 33:275-289

Tissue	Cases Exposure Route	Range	Mean	General Information
4964 Liver	a) 1 b) 1 c) 1 d) 1 Ingestion	a) Not given b) Not given c) Not given d) Not given	a) 0.084 ug/g b) 0.090 ug/g c) 0.054 ug/g d) 0.210 ug/g	a) 7 hr after start of dosing, ingested 3 fry b) 24 hr, 3 fry c) 77 hr, 7 fry d) 221 hr, 15 fry Salmon fry exposed to 50 ug/l Eulan WA New for 2 hr and fed immediately to pike that were sexually immature, 19.5-28.0 cm, 57-96 g. Scotland, Loch Faskally (Pitlochry) GLC

MUSCLES; LIVER; KIDNEYS; SPLEEN; BILE; EYE; GILLS; BLOOD; ESOPHAGUS; INTESTINES; STOMACH; ADIPOSE TISSUE; SKIN; BRAIN; FISHES; AQUATIC; DELIBERATE EXPOSURE; SCOTLAND; JUVENILES

Machon, A.; North, M.J.; Price, N.C.; Wells, D.E. 1984 Environmental Pollution (Series A-Environmental and Biological) 33:295-302

Polychloro-2-(chloromethylsulphonamido)-diphenyl ether (No postings in CHEMLINE).

Pike, northern
ESOX LUCIUS

Tissue	Cases Exposure Route	Range	Mean	General Information
4985 Muscle	a) 1 b) 1 c) 1 d) 1 e) 1	a) Not given b) Not given c) Not given d) Not given e) Not given	a) 0.267 ug/g b) 0.141 ug/g c) 0.167 ug/g d) 0.356 ug/g e) 0.130 ug/g	a) 4 hr exposure b) 8 hr c) 14 hr d) 50 hr e) 240 hr 5 ug/l Eulan WA New. Sexually immature, 23-31 cm, 60-80 g. Scotland, Loch Faskally GLC

ESOPHAGUS; STOMACH; INTESTINES; SPLEEN; LIVER; BILE; KIDNEYS; GILLS; EYE; BRAIN; MUSCLES; BLOOD; SKIN; AQUATIC; FISHES; DELIBERATE EXPOSURE; SCOTLAND; JUVENILES

Machon, A.; North, M.J.; Price, N.C.; Wells, D.E. 1984 Environmental Pollution (Series A-Environmental and Biological) 33:275-289

Tissue	Cases Exposure Route	Range	Mean	General Information
4986 Muscle	a) 1 b) 1 c) 1 d) 1 Ingestion	a) Not given b) Not given c) Not given d) Not given	a) 0.010 ug/g b) 0.047 ug/g c) 0.154 ug/g d) 0.068 ug/g	a) 7 hr after start of dosing, ingested 3 fry b) 24 hr, 3 fry c) 77 hr, 7 fry d) 221 hr, 15 fry Salmon fry exposed to 50 ug/l Eulan WA New for 2 hr and fed immediately to pike that were sexually immature, 19.5-23.0 cm, 57-96 g. Scotland, Loch Faskally (Pitlochry) GLC

MUSCLES; LIVER; KIDNEYS; SPLEEN; BILE; EYE; GILLS; BLOOD; ESOPHAGUS; INTESTINES; STOMACH; ADIPOSE TISSUE; SKIN; BRAIN; FISHES; AQUATIC; DELIBERATE EXPOSURE; SCOTLAND; JUVENILES

Machon, A.; North, M.J.; Price, N.C.; Wells, D.E. 1984 Environmental Pollution (Series A-Environmental and Biological) 33:295-302

Tissue	Cases Exposure Route	Range	Mean	General Information
4987 Skin	a) 1 b) 1 c) 1 d) 1 e) 1	a) Not given b) Not given c) Not given d) Not given e) Not given	a) 0.486 ug/g b) 0.402 ug/g c) 0.312 ug/g d) $<$0.01 ug/g e) 0.644 ug/g	a) 4 hr exposure b) 8 hr c) 26 hr d) 50 hr e) 240 hr 5 ug/l Eulan WA New. Sexually immature, 23-31 cm, 60-80 g. Scotland, Loch Faskally GLC

ESOPHAGUS; STOMACH; INTESTINES; SPLEEN; LIVER; BILE; KIDNEYS; GILLS; EYE; BRAIN; MUSCLES; BLOOD; SKIN; AQUATIC; FISHES; DELIBERATE EXPOSURE; SCOTLAND; JUVENILES

Machon, A.; North, M.J.; Price, N.C.; Wells, D.E. 1984 Environmental Pollution (Series A-Environmental and Biological) 33:275-289

Polychloro-2-(chloromethylsulphonamido)-diphenyl ether (No postings in CHEMLINE).

Pike, northern
ESOX LUCIUS

Tissue	Cases Exposure Route	Range	Mean	General Information
4988 Skin	a) 1 b) 1 c) 1 Ingestion	a) Not given b) Not given c) Not given	a) 0.071 ug/g b) 0.057 ug/g c) 0.893 ug/g	a) 7 hr after start of dosing, ingested 3 fry b) 72 hr, 7 fry c) 221 hr, 15 fry Salmon fry exposed to 50 ug/l Eulan WA New for 2 hr and fed immediately to pike that were sexually immature, 19.5-23 cm, 57-96 g. Scotland, Loch Faskally (Pitlochry) GLC

MUSCLES; LIVER; KIDNEYS; SPLEEN; BILE; EYE; GILLS; BLOOD; ESOPHAGUS; INTESTINES; STOMACH; ADIPOSE TISSUE; SKIN; BRAIN; FISHES; AQUATIC; DELIBERATE EXPOSURE; SCOTLAND; JUVENILES

Machon, A.; North, M.J.; Price, N.C.; Wells, D.E. 1984 Environmental Pollution (Series A-Environmental and Biological) 33:295-302

Tissue	Cases Exposure Route	Range	Mean	General Information
4989 Spleen	a) 1 b) 1 c) 1 d) 1 e) 1 f) 1	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given	a) 1.106 ug/g b) 10.552 ug/g c) 0.817 ug/g d) 5.393 ug/g e) 0.212 ug/g f) 3.633 ug/g	a) 4 hr exposure b) 8 hr c) 14 hr d) 26 hr e) 50 hr f) 240 hr 5 ug/l Eulan WA New. 60-80 g, sexually immature, 23-31 cm long. Additional data given. Scotland, Loch Faskally GLC

ESOPHAGUS; STOMACH; INTESTINES; SPLEEN; LIVER; BILE; KIDNEYS; GILLS; EYE; BRAIN; MUSCLES; BLOOD; SKIN; AQUATIC; FISHES; DELIBERATE EXPOSURE; SCOTLAND; JUVENILES

Machon, A.; North, M.J.; Price, N.C.; Wells, D.E. 1984 Environmental Pollution (Series A-Environmental and Biological) 33:275-289

Tissue	Cases Exposure Route	Range	Mean	General Information
4990 Spleen	a) 1 b) 1 Ingestion	a) Not given b) Not given	a) 6.57 ug/g b) 23.209	a) 7 hr after start of dosing, ingested 3 fry b) 221 hr, 15 fry Salmon fry exposed to 50 ug/l Eulan WA New for 2 hr and fed immediately to pike that were sexually immature, 19.5-23 cm, 57-96 g. Scotland, Loch Faskally (Pitlochry) GLC

MUSCLES; LIVER; KIDNEYS; SPLEEN; BILE; EYE; GILLS; BLOOD; ESOPHAGUS; INTESTINES; STOMACH; ADIPOSE TISSUE; SKIN; BRAIN; FISHES; AQUATIC; DELIBERATE EXPOSURE; SCOTLAND; JUVENILES

Machon, A.; North, M.J.; Price, N.C.; Wells, D.E. 1984 Environmental Pollution (Series A-Environmental and Biological) 33:295-302

Polychloro-2-(chloromethylsulphonamido)-diphenyl ether (No postings in CHEMLINE).

Pike, northern
ESOX LUCIUS

Tissue	Cases Exposure Route	Range	Mean	General Information
4991 Stomach	a) 1 b) 1 c) 1 d) 1 e) 1 f) 1	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given	a) 0.069 ug/g b) 0.505 ug/g c) 0.166 ug/g d) 0.212 ug/g e) <0.01 ug/g f) 0.587 ug/g	a) 4 hr exposure b) 8 hr c) 14 hr d) 26 hr e) 50 hr f) 240 hr 5 ug/l Eulan WA New. 60-80 g, sexually immature, 23-31 cm long. Additional data given. Scotland, Loch Faskally GLC

ESOPHAGUS; STOMACH; INTESTINES; SPLEEN; LIVER; BILE; KIDNEYS; GILLS; EYE; BRAIN; MUSCLES; BLOOD; SKIN; AQUATIC; FISHES; DELIBERATE EXPOSURE; SCOTLAND; JUVENILES

Machon, A.; North, M.J.; Price, N.C.; Wells, D.E. 1984 Environmental Pollution (Series A-Environmental and Biological) 33:275-280

Tissue	Cases Exposure Route	Range	Mean	General Information
4992 Stomach	a) 1 b) 1 c) 1 d) 1 Ingestion	a) Not given b) Not given c) Not given d) Not given	a) 0.303 ug/g b) 0.646 ug/g c) 0.189 ug/g d) 0.715 ug/g	a) 7 hr after start of dosing, ingested 3 fry b) 24 hr, 3 fry c) 77 hr, 7 fry d) 221 hr, 15 fry Salmon fry exposed to 50 ug/l Eulan WA New for 2 hr and fed immediately to pike that were sexually immature, 19.5-23.0 cm, 57-96 g. Scotland, Loch Faskally (Pitlochry) GLC

MUSCLES; LIVER; KIDNEYS; SPLEEN; BILE; EYE; GILLS; BLOOD; ESOPHAGUS; INTESTINES; STOMACH; ADIPOSE TISSUE; SKIN; BRAIN; FISHES; AQUATIC; DELIBERATE EXPOSURE; SCOTLAND; JUVENILES

Machon, A.; North, M.J.; Price, N.C.; Wells, D.E. 1984 Environmental Pollution (Series A-Environmental and Biological) 33:295-302

Polychloro-2-aminodiphenyl ether (No postings in CHEMLINE).

Pike, northern
ESOX LUCIUS

Tissue	Cases Exposure Route	Range	Mean	General Information
4993 Adipose	a) 1 b) 1 c) 1 d) 1 e) 1 f) 1 g) 1 h) 1 Ingestion	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given g) Not given h) Not given	a) 1.133 ug/g b) 1.942 ug/g c) 1.001 ug/g d) 3.393 ug/g e) 0.769 ug/g f) 3.158 ug/g g) 12.754 ug/g h) 3.198 ug/g	a) Intestine fat, 7 hr after start of dosing, ingested 3 fry b) 24 hr, ingested 3 fry c) 77 hr, ingested 7 fry d) 221 hr, ingested 15 fry e) Stomach fat 7 hr, ingested 3 fry f) 24 hr, ingested 3 fry g) 77 hr, ingested 7 fry h) 221 hr, ingested 15 fry Salmon fry exposed to 50 ug/l Eulan WA New (mothproofing agent) for 2 hr and fed immediately to pike that were sexually immature, 19.5-28.0 cm and 57-96 g. Scotland, Loch Faskally (Pitlochry) GLC

MUSCLES; LIVER; KIDNEYS; SPLEEN; BILE; EYE; GILLS; BLOOD; ESOPHAGUS; INTESTINES; STOMACH; ADIPOSE TISSUE; SKIN; BRAIN; FISHES; AQUATIC; DELIBERATE EXPOSURE; SCOTLAND; JUVENILES

Machon, A.; North, M.J.; Price, N.C.; Wells, D.E. 1984 Environmental Pollution (Series A-Environmental and Biological) 33:295-302

Tissue	Cases Exposure Route	Range	Mean	General Information
4994 Bile	a) 1 b) 1 c) 1 d) 1 e) 1 f) 1	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given	a) 0.801 ug/g b) 1.320 ug/g c) 0.511 ug/g d) 0.992 ug/g e) 4.129 ug/g f) 17.634 ug/g	a) 4 hr exposure b) 8 hr c) 14 hr d) 26 hr e) 50 hr f) 240 hr 5 ug/l Eulan WA New. 60-80 g, sexually immature, 28-31 cm long. Additional data given. Scotland, Loch Faskally GLC

ESOPHAGUS; STOMACH; INTESTINES; SPLEEN; LIVER; BILE; KIDNEYS; GILLS; EYE; BRAIN; MUSCLES; BLOOD; SKIN; AQUATIC; FISHES; DELIBERATE EXPOSURE; SCOTLAND; JUVENILES

Machon, A.; North, M.J.; Price, N.C.; Wells, D.E. 1984 Environmental Pollution (Series A-Environmental and Biological) 33:275-289

Tissue	Cases Exposure Route	Range	Mean	General Information
4995 Bile	a) 1 b) 1 Ingestion	Not given	218.2 ug/g	a) 221 hr after start of dosing, ingested 15 fry Salmon fry exposed to 50 ug/l Eulan WA New for 2 hr and fed immediately to pike that were sexually immature, 19.5-23 cm, 57-96 g. Scotland, Loch Faskally (Pitlochry) GLC

MUSCLES; LIVER; KIDNEYS; SPLEEN; BILE; EYE; GILLS; BLOOD; ESOPHAGUS; INTESTINES; STOMACH; ADIPOSE TISSUE; SKIN; BRAIN; FISHES; AQUATIC; DELIBERATE EXPOSURE; SCOTLAND; JUVENILES

Machon, A.; North, M.J.; Price, N.C.; Wells, D.E. 1984 Environmental Pollution (Series A-Environmental and Biological) 33:295-302

Polychloro-2-aminodiphenyl ether (No postings in CHEMLINE).

Pike, northern
ESOX LUCIUS

Tissue	Cases Exposure Route	Range	Mean	General Information
4996 Blood	a) 1 b) 1 c) 1 d) 1 e) 1 f) 1	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given	a) 0.461 ug/g b) 0.243 ug/g c) 0.263 ug/g d) 0.348 ug/g e) 0.546 ug/g f) 1.190 ug/g	a) 4 hr exposure b) 8 hr c) 14 hr d) 26 hr e) 50 hr f) 240 hr 5 ug/l Eulan WA New. 60-80 g, sexually immature, 23-31 cm long. Additional data given. Scotland, Loch Faskally GLC

ESOPHAGUS; STOMACH; INTESTINES; SPLEEN; LIVER; BILE; KIDNEYS; GILLS; EYE; BRAIN; MUSCLES; BLOOD; SKIN; AQUATIC; FISHES; DELIBERATE EXPOSURE; SCOTLAND; JUVENILES

Machon, A.; North, M.J.; Price, N.C.; Wells, D.E. 1984 Environmental Pollution (Series A-Environmental and Biological) 33:275-289

Tissue	Cases Exposure Route	Range	Mean	General Information
4997 Blood	a) 1 b) 1 c) 1 d) 1 Ingestion	a) Not given b) Not given c) Not given d) Not given	a) 0.243 ug/g b) 0.062 ug/g c) 0.079 ug/g d) 0.799 ug/g	a) 7 hr after start of dosing, ingested 3 fry b) 24 hr, 3 fry c) 77 hr, 7 fry d) 221 hr, 15 fry Salmon fry exposed to 50 ug/l Eulan WA New for 2 hr and fed immediately to pike that were sexually immature, 19.5-23.0 cm, 57-96 g. Scotland, Loch Faskally (Pitlochry) GLC

MUSCLES; LIVER; KIDNEYS; SPLEEN; BILE; EYE; GILLS; BLOOD; ESOPHAGUS; INTESTINES; STOMACH; ADIPOSE TISSUE; SKIN; BRAIN; FISHES; AQUATIC; DELIB-ERATE EXPOSURE; SCOTLAND; JUVENILES

Machon, A.; North, M.J.; Price, N.C.; Wells, D.E. 1984 Environmental Pollution (Series A-Environmental and Biological) 33:295-302

Tissue	Cases Exposure Route	Range	Mean	General Information
4998 Brain	a) 1 b) 1 c) 1 d) 1 e) 1 f) 1	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given	a) 4.010 ug/g b) 2.590 ug/g c) 0.658 ug/g d) <0.01 ug/g e) 2.795 ug/g f) 5.623 ug/g	a) 4 hr exposure b) 8 hr c) 14 hr d) 26 hr e) 50 hr f) 240 hr 5 ug/l Eulan WA New. 60-80 g, sexually immature, 23-31 cm long. Scotland, Loch Faskally GLC

ESOPHAGUS; STOMACH; INTESTINES; SPLEEN; LIVER; BILE; KIDNEYS; GILLS; EYE; BRAIN; MUSCLES; BLOOD; SKIN; AQUATIC; FISHES; DELIBERATE EXPOSURE; SCOTLAND; JUVENILES

Machon, A.; North, M.J.; Price, N.C.; Wells, D.E. 1984 Environmental Pollution (Series A-Environmental and Biological) 33:275-289

Polychloro-2-aminodiphenyl ether (No postings in CHEMLINE).

Pike, northern
ESOX LUCIUS

Tissue	Cases Exposure Route	Range	Mean	General Information
4999 Brain	a) 1 b) 1 Ingestion	a) Not given b) Not given	a) 0.760 b) 2.339 ug/g	a) 7 hr after start of dosing, ingested 3 fry b) 221 hr, 15 fry Salmon fry exposed to 50 ug/l Eulan WA New for 2 hr and fed immediately to pike that were sexually immature, 19.5-23 cm, 57-96 g. Scotland, Loch Faskally (Pitlochry) GLC
MUSCLES; LIVER; KIDNEYS; SPLEEN; BILE; EYE; GILLS; BLOOD; ESOPHAGUS; INTESTINES; STOMACH; ADIPOSE TISSUE; SKIN; BRAIN; FISHES; AQUATIC; DELIBERATE EXPOSURE; SCOTLAND; JUVENILES				
Machon, A.; North, M.J.; Price, N.C.; Wells, D.E. 1984 Environmental Pollution (Series A-Environmental and Biological) 33:295-302				

Tissue	Cases Exposure Route	Range	Mean	General Information
5000 Esophagus	a) 1 b) 1 c) 1 d) 1 e) 1 f) 1	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given	a) 0.596 ug/g b) 0.720 ug/g c) <0.01 ug/g d) 0.351 ug/g e) 0.590 ug/g f) 1.376 ug/g	a) 4 hr exposure b) 8 hr c) 14 hr d) 26 hr e) 50 hr f) 240 hr 5 ug/l Eulan WA New. 60-80 g, sexually immature, 23-31 cm long. Scotland, Loch Faskally GLC
ESOPHAGUS; STOMACH; INTESTINES; SPLEEN; LIVER; BILE; KIDNEYS; GILLS; EYE; BRAIN; MUSCLES; BLOOD; SKIN; AQUATIC; FISHES; DELIBERATE EXPOSURE; SCOTLAND; JUVENILES				
Machon, A.; North, M.J.; Price, N.C.; Wells, D.E. 1984 Environmental Pollution (Series A-Environmental and Biological) 33:275-289				

Tissue	Cases Exposure Route	Range	Mean	General Information
5001 Esophagus	a) 1 b) 1 c) 1 Ingestion	a) Not given b) Not given c) Not given	a) 0.547 ug/g b) 0.346 ug/g c) 0.518 ug/g	a) 7 hr after start of dosing, ingested 3 fry b) 24 hr, 3 fry c) 221 hr, 15 fry Salmon fry exposed to 50 ug/l Eulan WA New for 2 hr and fed immediately to pike that were sexually immature, 19.5-23.0 cm, 57-96 g. Scotland, Loch Faskally (Pitlochry) GLC
MUSCLES; LIVER; KIDNEYS; SPLEEN; BILE; EYE; GILLS; BLOOD; ESOPHAGUS; INTESTINES; STOMACH; ADIPOSE TISSUE; SKIN; BRAIN; FISHES; AQUATIC; DELIBERATE EXPOSURE; SCOTLAND; JUVENILES				
Machon, A.; North, M.J.; Price, N.C.; Wells, D.E. 1984 Environmental Pollution (Series A-Environmental and Biological) 33:295-302				

Polychloro-2-aminodiphenyl ether (No postings in CHEMLINE).

Pike, northern
ESOX LUCIUS

Tissue	Cases Exposure Route	Range	Mean	General Information
4999 Brain	a) 1 b) 1 Ingestion	a) Not given b) Not given	a) 0.760 b) 2.339 ug/g	a) 7 hr after start of dosing, ingested 3 fry b) 221 hr, 15 fry Salmon fry exposed to 50 ug/l Eulan WA New for 2 hr and fed immediately to pike that were sexually immature, 19.5-23 cm, 57-96 g. Scotland, Loch Faskally (Pitlochry) GLC

MUSCLES; LIVER; KIDNEYS; SPLEEN; BILE; EYE; GILLS; BLOOD; ESOPHAGUS; INTESTINES; STOMACH; ADIPOSE TISSUE; SKIN; BRAIN; FISHES; AQUATIC; DELIBERATE EXPOSURE; SCOTLAND; JUVENILES

Machon, A.; North, M.J.; Price, N.C.; Wells, D.E. 1984 Environmental Pollution (Series A-Environmental and Biological) 33:295-302

Tissue	Cases Exposure Route	Range	Mean	General Information
5000 Esophagus	a) 1 b) 1 c) 1 d) 1 e) 1 f) 1	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given	a) 0.595 ug/g b) 0.720 ug/g c) <0.01 ug/g d) 0.351 ug/g e) 0.590 ug/g f) 1.376 ug/g	a) 4 hr exposure b) 8 hr c) 14 hr d) 26 hr e) 50 hr f) 240 hr 5 ug/l Eulan WA New. 60-80 g, sexually immature, 23-31 cm long. Scotland, Loch Faskally GLC

ESOPHAGUS; STOMACH; INTESTINES; SPLEEN; LIVER; BILE; KIDNEYS; GILLS; EYE; BRAIN; MUSCLES; BLOOD; SKIN; AQUATIC; FISHES; DELIBERATE EXPOSURE; SCOTLAND; JUVENILES

Machon, A.; North, M.J.; Price, N.C.; Wells, D.E. 1984 Environmental Pollution (Series A-Environmental and Biological) 33:275-289

Tissue	Cases Exposure Route	Range	Mean	General Information
5001 Esophagus	a) 1 b) 1 c) 1 Ingestion	a) Not given b) Not given c) Not given	a) 0.547 ug/g b) 0.346 ug/g c) 0.518 ug/g	a) 7 hr after start of dosing, ingested 3 fry b) 24 hr, 3 fry c) 221 hr, 15 fry Salmon fry exposed to 50 ug/l Eulan WA New for 2 hr and fed immediately to pike that were sexually immature, 19.5-23.0 cm, 57-96 g. Scotland, Loch Faskally (Pitlochry) GLC

MUSCLES; LIVER; KIDNEYS; SPLEEN; BILE; EYE; GILLS; BLOOD; ESOPHAGUS; INTESTINES; STOMACH; ADIPOSE TISSUE; SKIN; BRAIN; FISHES; AQUATIC; DELIBERATE EXPOSURE; SCOTLAND; JUVENILES

Machon, A.; North, M.J.; Price, N.C.; Wells, D.E. 1984 Environmental Pollution (Series A-Environmental and Biological) 33:295-302

Polychloro-2-aminodiphenyl ether (No postings in CHEMLINE).

Pike, northern
ESOX LUCIUS

Tissue	Cases Exposure Route	Range	Mean	General Information
5005 Gills	a) 1 b) 1 c) 1 Ingestion	a) Not given b) Not given c) Not given	a) 0.410 ug/g b) 0.389 ug/g c) 0.483 ug/g	a) 7 hr after start of dosing, ingested 3 fry b) 72 hr, 7 fry c) 221 hr, 15 fry Salmon fry exposed to 50 ug/l Eulan WA New for 2 hr and fed immediately to pike that were sexually immature, 19.5-23 cm, 57-96 g. Scotland, Loch Faskally (Pitlochry) GLC

MUSCLES; LIVER; KIDNEYS; SPLEEN; BILE; EYE; GILLS; BLOOD; ESOPHAGUS; INTESTINES; STOMACH; ADIPOSE TISSUE; SKIN; BRAIN; FISHES; AQUATIC; DELIBERATE EXPOSURE; SCOTLAND; JUVENILES

Machon, A.; North, M.J.; Price, N.C.; Wells, D.E. 1984 Environmental Pollution (Series A-Environmental and Biological) 33:295-302

Tissue	Cases Exposure Route	Range	Mean	General Information
5006 Intestine	a) 1 b) 1 c) 1 d) 1 e) 1 f) 1	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given	a) 1.737 ug/g b) 0.178 ug/g c) 0.363 ug/g d) 0.502 ug/g e) 0.892 ug/g f) 0.851 ug/g	a) 4 hr exposure b) 8 hr c) 14 hr d) 26 hr e) 50 hr f) 240 hr 5 ug/l Eulan WA New. 60-80 g, sexually immature, 23-31 cm long. Additional data given. Scotland, Loch Faskally GLC

ESOPHAGUS; STOMACH; INTESTINES; SPLEEN; LIVER; BILE; KIDNEYS; GILLS; EYE; BRAIN; MUSCLES; BLOOD; SKIN; AQUATIC; FISHES; DELIBERATE EXPOSURE; SCOTLAND; JUVENILES

Machon, A.; North, M.J.; Price, N.C.; Wells, D.E. 1984 Environmental Pollution (Series A-Environmental and Biological) 33:275-289

Tissue	Cases Exposure Route	Range	Mean	General Information
5007 Intestine	a) 1 b) 1 c) 1 d) 1 Ingestion	a) Not given b) Not given c) Not given d) Not given	a) 0.178 ug/g b) 0.270 ug/g c) 0.488 ug/g d) 0.575 ug/g	a) 7 hr after start of dosing, ingested 3 fry b) 24 hr, 3 fry c) 77 hr, 7 fry d) 221 hr, 15 fry Salmon fry exposed to 50 ug/l Eulan WA New for 2 hr and fed immediately to pike that were sexually immature, 19.5-23.0 cm, 57-96 g. Scotland, Loch Faskally (Pitlochry) GLC

MUSCLES; LIVER; KIDNEYS; SPLEEN; BILE; EYE; GILLS; BLOOD; ESOPHAGUS; INTESTINES; STOMACH; ADIPOSE TISSUE; SKIN; BRAIN; FISHES; AQUATIC; DELIBERATE EXPOSURE; SCOTLAND; JUVENILES

Machon, A.; North, M.J.; Price, N.C.; Wells, D.E. 1984 Environmental Pollution (Series A-Environmental and Biological) 33:295-302

Polychloro-2-aminodiphenyl ether (No postings in CHEMLINE).

Pike, northern
ESOX LUCIUS

Tissue	Cases Exposure Route	Range	Mean	General Information
5008 Kidney	a) 1 b) 1 c) 1 d) 1 e) 1 f) 1	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given	a) 1.719 ug/g b) 0.326 ug/g c) <0.01 ug/g d) 1.522 ug/g e) 2.696 ug/g f) 14.450 ug/g	a) 4 hr exposure b) 8 hr c) 14 hr d) 26 hr e) 50 hr f) 240 hr 5 ug/l Eulan WA New. 60-80 g, sexually immature, 23-31 cm long. Additional data given. Scotland, Loch Faskally GLC

ESOPHAGUS; STOMACH; INTESTINES; SPLEEN; LIVER; BILE; KIDNEYS; GILLS; EYE; BRAIN; MUSCLES; BLOOD; SKIN; AQUATIC; FISHES; DELIBERATE EXPOSURE; SCOTLAND; JUVENILES

Machon, A.; North, M.J.; Price, N.C.; Wells, D.E. 1984 Environmental Pollution (Series A-Environmental and Biological) 33:275-289

Tissue	Cases Exposure Route	Range	Mean	General Information
5009 Kidney	a) 1 b) 1 c) 1 d) 1 Ingestion	a) Not given b) Not given c) Not given d) Not given	a) 0.691 ug/g b) 0.712 ug/g c) 23.67 ug/g d) 2.651 ug/g	a) 7 hr after start of dosing, ingested 3 fry b) 24 hr, 3 fry c) 77 hr, 7 fry d) 221 hr, 15 fry Salmon fry exposed to 50 ug/l Eulan WA New for 2 hr and fed immediately to pike that were sexually immature, 19.5-23.0 cm, 57-96 g. Scotland, Loch Faskally (Pitlochry) GLC

MUSCLES; LIVER; KIDNEYS; SPLEEN; BILE; EYE; GILLS; BLOOD; ESOPHAGUS; INTESTINES; STOMACH; ADIPOSE TISSUE; SKIN; BRAIN; FISHES; AQUATIC; DELIBERATE EXPOSURE; SCOTLAND; JUVENILES

Machon, A.; North, M.J.; Price, N.C.; Wells, D.E. 1984 Environmental Pollution (Series A-Environmental and Biological) 33:295-302

Tissue	Cases Exposure Route	Range	Mean	General Information
5010 Liver	a) 1 b) 1 c) 1 d) 1 e) 1 f) 1	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given	a) 3.533 ug/g b) 0.909 ug/g c) 3.880 ug/g d) 1.813 ug/g e) 0.425 ug/g f) 5.543 ug/g	a) 4 hr exposure b) 8 hr c) 14 hr d) 26 hr e) 50 hr f) 240 hr 5 ug/l Eulan WA New. 60-80 g, sexually immature, 23-31 cm long. Additional data given. Scotland, Loch Faskally GLC

ESOPHAGUS; STOMACH; INTESTINES; SPLEEN; LIVER; BILE; KIDNEYS; GILLS; EYE; BRAIN; MUSCLES; BLOOD; SKIN; AQUATIC; FISHES; DELIBERATE EXPOSURE; SCOTLAND; JUVENILES

Machon, A.; North, M.J.; Price, N.C.; Wells, D.E. 1984 Environmental Pollution (Series A-Environmental and Biological) 33:275-289

Polychloro-2-aminodiphenyl ether (No postings in CHEMLINE).

Pike, northern
ESOX LUCIUS

Tissue	Cases Exposure Route	Range	Mean	General Information
5011 Liver	a) 1 b) 1 c) 1 d) 1 Ingestion	a) Not given b) Not given c) Not given d) Not given	a) 0.048 ug/g b) 0.470 ug/g c) 1.460 ug/g d) 1.700 ug/g	a) 7 hr after start of dosing, ingested 3 fry b) 24 hr, 3 fry c) 77 hr, 7 fry d) 221 hr, 15 fry Salmon fry exposed to 50 ug/l Eulan WA New for 2 hr and fed immediately to pike that were sexually immature, 19.5-23.0 cm, 57-96 g. Scotland, Loch Paskally (Pitlochry) GLC

MUSCLES; LIVER; KIDNEYS; SPLEEN; BILE; EYE; GILLS; BLOOD; ESOPHAGUS; INTESTINES; STOMACH; ADIPOSE TISSUE; SKIN; BRAIN; FISHES; AQUATIC; DELIBERATE EXPOSURE; SCOTLAND; JUVENILES

Machon, A.; North, M.J.; Price, N.C.; Wells, D.E. 1984 Environmental Pollution (Series A-Environmental and Biological) 33:295-302

Tissue	Cases Exposure Route	Range	Mean	General Information
5012 Muscle	a) 1 b) 1 c) 1 d) 1 e) 1	a) Not given b) Not given c) Not given d) Not given e) Not given	a) 0.131 ug/g b) 0.084 ug/g c) <0.01 ug/g d) 0.504 ug/g e) 0.713 ug/g	a) 4 hr exposure b) 8 hr c) 14 hr d) 26 hr e) 50 hr f) 240 hr 5 ug/l Eulan WA New. Sexually immature, 23-31 cm, 60-80 g. Scotland, Loch Paskally GLC

ESOPHAGUS; STOMACH; INTESTINES; SPLEEN; LIVER; BILE; KIDNEYS; GILLS; EYE; BRAIN; MUSCLES; BLOOD; SKIN; AQUATIC; FISHES; DELIBERATE EXPOSURE; SCOTLAND; JUVENILES

Machon, A.; North, M.J.; Price, N.C.; Wells, D.E. 1984 Environmental Pollution (Series A-Environmental and Biological) 33:275-289

Tissue	Cases Exposure Route	Range	Mean	General Information
5013 Muscle	a) 1 b) 1 c) 1 d) 1 Ingestion	a) Not given b) Not given c) Not given d) Not given	a) 0.052 ug/g b) 0.030 ug/g c) 0.249 ug/g d) 0.047 ug/g	a) 7 hr after start of dosing, ingested 3 fry b) 24 hr, 3 fry c) 77 hr, 7 fry d) 221 hr, 15 fry Salmon fry exposed to 50 ug/l Eulan WA New for 2 hr and fed immediately to pike that were sexually immature, 19.5-23.0 cm, 57-96 g. Scotland, Loch Paskally (Pitlochry) GLC

MUSCLES; LIVER; KIDNEYS; SPLEEN; BILE; EYE; GILLS; BLOOD; ESOPHAGUS; INTESTINES; STOMACH; ADIPOSE TISSUE; SKIN; BRAIN; FISHES; AQUATIC; DELIBERATE EXPOSURE; SCOTLAND; JUVENILES

Machon, A.; North, M.J.; Price, N.C.; Wells, D.E. 1984 Environmental Pollution (Series A-Environmental and Biological) 33:295-302

Polychloro-2-aminodiphenyl ether (No postings in CHEMLINE).

Pike, northern
ESOX LUCIUS

Tissue	Cases Exposure Route	Range	Mean	General Information
5014 Skin	a) 1 b) 1 c) 1 d) 1 e) 1	a) Not given b) Not given c) Not given d) Not given	a) 0.267 ug/g b) 0.141 ug/g c) 0.167 ug/g d) 0.355 ug/g	a) 4 hr exposure b) 8 hr c) 14 hr d) 50 hr e) 240 hr 5 ug/l Eulan WA New. Sexually immature, 23-31 cm, 60-80 g. Scotland, Loch Faskally GLC

ESOPHAGUS; STOMACH; INTESTINES; SPLEEN; LIVER; BILE; KIDNEYS; GILLS; EYE; BRAIN; MUSCLES; BLOOD; SKIN; AQUATIC; FISHES; DELIBERATE EXPOSURE; SCOTLAND; JUVENILES

Machon, A.; North, M.J.; Price, N.C.; Wells, D.E. 1984 Environmental Pollution (Series A-Environmental and Biological) 33:275-289

Tissue	Cases Exposure Route	Range	Mean	General Information
5015 Skin	a) 1 b) 1 c) 1 Ingestion	a) Not given b) Not given c) Not given	a) 0.082 ug/g b) 0.308 ug/g c) 0.174 ug/g	a) 7 hr after start of dosing, ingested 3 fry b) 72 hr, 7 fry c) 221 hr, 15 fry Salmon fry exposed to 50 ug/l Eulan WA New for 2 hr and fed immediately to pike that were sexually immature, 19.5-28 cm, 57-96 g. Scotland, Loch Faskally (Pitlochry) GLC

MUSCLES; LIVER; KIDNEYS; SPLEEN; BILE; EYE; GILLS; BLOOD; ESOPHAGUS; INTESTINES; STOMACH; ADIPOSE TISSUE; SKIN; BRAIN; FISHES; AQUATIC; DELIBERATE EXPOSURE; SCOTLAND; JUVENILES

Machon, A.; North, M.J.; Price, N.C.; Wells, D.E. 1984 Environmental Pollution (Series A-Environmental and Biological) 33:295-302

Tissue	Cases Exposure Route	Range	Mean	General Information
5016 Spleen	a) 1 b) 1 c) 1 d) 1 e) 1 f) 1	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given	a) 7.044 ug/g b) 11.009 ug/g c) 2.372 ug/g d) 3.660 ug/g e) 1.139 ug/g f) 22.187 ug/g	a) 4 hr exposure b) 8 hr c) 14 hr d) 26 hr e) 50 hr f) 240 hr 5 ug/l Eulan WA New. 60-80 g, sexually immature, 23-31 cm long. Additional data given. Scotland, Loch Faskally GLC

ESOPHAGUS; STOMACH; INTESTINES; SPLEEN; LIVER; BILE; KIDNEYS; GILLS; EYE; BRAIN; MUSCLES; BLOOD; SKIN; AQUATIC; FISHES; DELIBERATE EXPOSURE; SCOTLAND; JUVENILES

Machon, A.; North, M.J.; Price, N.C.; Wells, D.E. 1984 Environmental Pollution (Series A-Environmental and Biological) 33:275-289

Polychloro-2-aminodiphenyl ether (No postings in CHEMLINE).

Pike, northern
ESOX LUCIUS

Tissue	Cases Exposure Route	Range	Mean	General Information
5017 Spleen	a) 1 b) 1 Ingestion	a) Not given b) Not given	a) 234.5 ug/g b) 12.043 ug/g	a) 7 hr after start of dosing, ingested 3 fry b) 221 hr, 15 fry Salmon fry exposed to 50 ug/l Eulan WA New for 2 hr and fed immediately to pike that were sexually immature, 19.5-23 cm, 57-96 g. Scotland, Loch Faskally (Pitlochry) GLC

MUSCLES; LIVER; KIDNEYS; SPLEEN; BILE; EYE; GILLS; BLOOD; ESOPHAGUS; INTESTINES; STOMACH; ADIPOSE TISSUE; SKIN; BRAIN; FISHES; AQUATIC; DELIBERATE EXPOSURE; SCOTLAND; JUVENILES

Machon, A.; North, M.J.; Price, N.C.; Wells, D.E. 1984 Environmental Pollution (Series A-Environmental and Biological) 33:295-302

Tissue	Cases Exposure Route	Range	Mean	General Information
5018 Stomach	a) 1 b) 1 c) 1 d) 1 e) 1 f) 1	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given	a) 0.345 ug/g b) 0.492 ug/g c) 0.218 ug/g d) 0.486 ug/g e) 0.865 ug/g f) 1.948 ug/g	a) 4 hr exposure b) 8 hr c) 14 hr d) 26 hr e) 50 hr f) 240 hr 5 ug/l Eulan WA New. 60-80 g, sexually immature, 23-31 cm long. Additional data given. Scotland, Loch Faskally GLC

ESOPHAGUS; STOMACH; INTESTINES; SPLEEN; LIVER; BILE; KIDNEYS; GILLS; EYE; BRAIN; MUSCLES; BLOOD; SKIN; AQUATIC; FISHES; DELIBERATE EXPOSURE; SCOTLAND; JUVENILES

Machon, A.; North, M.J.; Price, N.C.; Wells, D.E. 1984 Environmental Pollution (Series A-Environmental and Biological) 33:275-289

Tissue	Cases Exposure Route	Range	Mean	General Information
5019 Stomach	a) 1 b) 1 c) 1 d) 1 Ingestion	a) Not given b) Not given c) Not given d) Not given	a) 14.069 ug/g b) 0.33 ug/g c) 0.115 ug/g d) 0.566 ug/g	a) 7 hr after start of dosing, ingested 3 fry b) 24 hr, 3 fry c) 77 hr, 7 fry d) 221 hr, 15 fry Salmon fry exposed to 50 ug/l Eulan WA New for 2 hr and fed immediately to pike that were sexually immature, 19.5-23.0 cm, 57-96 g. Scotland, Loch Faskally (Pitlochry) GLC

MUSCLES; LIVER; KIDNEYS; SPLEEN; BILE; EYE; GILLS; BLOOD; ESOPHAGUS; INTESTINES; STOMACH; ADIPOSE TISSUE; SKIN; BRAIN; FISHES; AQUATIC; DELIBERATE EXPOSURE; SCOTLAND; JUVENILES

Machon, A.; North, M.J.; Price, N.C.; Wells, D.E. 1984 Environmental Pollution (Series A-Environmental and Biological) 33:295-302

Polydimethylsiloxane (No postings in CHEMLINE).

Carp, silver
HYPOPHTHALMICHTHYS MOLITRIX

Tissue	Cases Exposure Route	Range	Mean	General Information
5020 Body	a) 4 b) 4 c) 4 d) 4	a) Not applicable b) Not applicable c) Not applicable d) Not applicable	a) 4.11+/-1.45 ppm b) 3.48+/-1.28 ppm c) 48.0+/-33.9 ppm d) 75.3+/-16.3 ppm	a) 1,200 b) 6,000 c) 25,000 d) 56,000 Molecular wt of PDMS fluids tested, semi-static flow system, 72 hr exposure. From fish farm, 45 g each. Bioconcentration factor (max. 1250+/-272) proportional to MW. Japan ICP-AES

BODY; AQUATIC; FISHES; DELIBERATE EXPOSURE; JAPAN; SILICON; ORGANOSILICON COMPOUNDS; BIOACCUMULATION; WATER POLLUTION

Watanabe, N.; Nakamura, T.; Watanabe, E. 1984 Science of the Total Environment 38:167-172

Potassium

7440-09-7
K
AtW 39.098, MP 63.2 C, BP 765.5 C, VP 100 mm Hg at 590 C

Beaver
CASTOR CANADENSIS

Tissue	Cases Exposure Route	Range	Mean	General Information
5021 Intestine	4 Ingestion	Not given	1895+/-326 ug/g	Undisturbed watershed. Specimens from fur trapper. Canada, Ontario, Georgian Bay, Tadenac Lake ES
5022 Kidney	4 Ingestion	Not given	2282+/-256 ug/g	Undisturbed watershed. Specimens from fur trapper. Canada, Ontario, Georgian Bay, Tadenac Lake ES
5023 Liver	4 Ingestion	Not given	2087+/-233 ug/g	Undisturbed watershed. Specimens from fur trapper. Canada, Ontario, Georgian Bay, Tadenac Lake ES

BEAVERS; OTTERS; RACCOONS; CANADA; BIOACCUMULATION; BIOMAGNIFICATION; SELENIUM; IRON; COPPER; CADMIUM; CALCIUM; ALUMINUM; MAGNESIUM; MANGANESE; SODIUM; NICKEL; PHOSPHORUS; ZINC; POTASSIUM; DETOXIFICATION; DIETS; LIVER; KIDNEYS; INTESTINES; MUSCLES; AQUATIC; TERRESTRIAL; ENVIRONMENTAL EXPOSURE; BIOLOGICAL MONITORING

Wren, C.D. 1984 Science of the Total Environment 34:177-184

Potassium
7440-09-7
K
AtW 39.098, MP 63.2 C, BP 765.5 C, VP 100 mm Hg at 590 C
Cattle
BOS sp.

Tissue	Cases Exposure Route	Range	Mean	General Information
5024 Blood, plasma	44 Ingestion	a) 14.5-15.2 mg/dl b) 14.7-15.85 mg/dl c) 14.6-15.75 mg/dl d) 15.3-16.25 mg/dl e) 17.2-18.3 mg/dl	a) Not given b) Not given c) Not given d) Not given e) Not given	a) Calves (16 wk old) fed diet containing 1% K, 73% total digestable nutrients (TDN) b) Diet with 1.4% K, 72% TDN c) Diet with 1% K, 55% TDN d) 1.4% K, 55% TDN e) Lactating cows fed diets 1.1-1.4% K, 67-74% TDN Calf data collected 1 hr before treatment-10 hr after treatment, values estimated from graph. Cow data collected over 16 wk treatment. Washington Milk yield significantly affected by treatments, greatest with low TDN:low K and high TDN:high K diets. Plasma insulin greatest in cows fed high TDN:high K diet. Growth hormone and urea N were reduced in these cows. AAS
CATTLE; BLOOD PLASMA; POTASSIUM; TERRESTRIAL; WASHINGTON; DIETS; LACTATION; METABOLISM; DELIBERATE EXPOSURE				
Kincaid, R.L.; Browning, D.; Cronrath, J.D.; Chew, B.P.; Hillers, J.K. 1984 Nutrition Reports International 30(3):571-580				

Tissue	Cases Exposure Route	Range	Mean	General Information
5025 Hair	Ingestion	Not given	1800 ppm	Data from one representative site. Deposition of elements on pasture. Collected Oct-Nov 1981-2. 5 yr old cows, 10 samples/farm, 9-14 farms, 7-12 sites. Deposition poorly correlated with essential elements, hair levels nearly constant. Belgium NA
CATTLE; HAIR; BIOLOGICAL MONITORING; AIR POLLUTION; LAND POLLUTION; ARSENIC; BARIUM; BROMINE; CERIUM; COBALT; CHROMIUM; CESIUM; IRON; POTASSIUM; LANTHANUM; SODIUM; RUBIDIUM; ANTIMONY; SCANDIUM; SELENIUM; SAMARIUM; THORIUM; ZINC; FOOD CONTAMINATION; BIOACCUMULATION; BIOCONCENTRATION; TERRESTRIAL; ENVIRONMENTAL EXPOSURE; TRACE ELEMENTS				
Ronneau, C.; Cara, J. 1984 Science of the Total Environment 39:135-142				

Potassium
7440-09-7
K
AtW 39.098, MP 63.2 C, BP 765.5 C, VP 100 mm Hg at 590 C

Cod, Pacific
GADUS MACROCEPHALUS

Tissue	Cases Exposure Route	Range	Mean	General Information
5026 Muscle	Ingestion	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given	a) 4735+/-623 ug/g b) 3463+/-458 ug/g c) 4155+/-186 ug/g d) 444+/-53.0 mg/100 g e) 4736+/-386 ug/g f) 4625+/-290 ug/g Wet wt	a) Near Cape Flattery, WA, 50 fish, mean wt 2623+/-1174 g b) Cape Sarichef, AK, 12 fish, 1148+/-649 g c) Cape Ommaney, AK, 11 fish, 798+/-497 g d) Overall mean, combined sites e) Nape section of fish, 30 fillets f) Tail section of fish, 30 fillets No significant difference between e), f), indicated no differences in body distribution. Pacific Ocean ES
FISHES; BIOLOGICAL MONITORING; PACIFIC OCEAN; ALUMINUM; BARIUM; CALCIUM; CHROMIUM; COPPER; IRON; MERCURY; POTASSIUM; LITHIUM; MAGNESIUM; MANGANESE; SODIUM; PHOSPHORUS; STRONTIUM; ZINC; AQUATIC; ENVIRONMENTAL EXPOSURE; WATER POLLUTION; FOOD CONTAMINATION; MUSCLES Teeny, F.M.; Gauglitz, E.J., Jr.; Hall, A.S.; Houle, C.R. 1984 Journal of Agricultural and Food Chemistry 32:852-855				

Mackerel, Atka
PLEUROGRAMMUS MONOPTERYGIUS

Tissue	Cases Exposure Route	Range	Mean	General Information
5027 Muscle	20 Ingestion	Not given	3495+/-1724 ug/g Wet wt	Off Kodiak Island, AK. Mean wt 461+/-156 g Pacific Ocean ES
FISHES; BIOLOGICAL MONITORING; PACIFIC OCEAN; ALUMINUM; BARIUM; CALCIUM; CHROMIUM; COPPER; IRON; MERCURY; POTASSIUM; LITHIUM; MAGNESIUM; MANGANESE; SODIUM; PHOSPHORUS; STRONTIUM; ZINC; AQUATIC; ENVIRONMENTAL EXPOSURE; WATER POLLUTION; FOOD CONTAMINATION; MUSCLES Teeny, F.M.; Gauglitz, E.J., Jr.; Hall, A.S.; Houle, C.R. 1984 Journal of Agricultural and Food Chemistry 32:852-855				

Otter
LUTRA CANADENSIS

Tissue	Cases Exposure Route	Range	Mean	General Information
5028 Intestine	4 Ingestion	Not given	2872+/-470 ug/g	Undisturbed watershed. Specimens from fur trapper. Canada, Ontario, Georgian Bay, Tadenac Lake ES
5029 Kidney	4 Ingestion	Not given	2047+/-308 ug/g	Undisturbed watershed. Specimens from fur trapper. Canada, Ontario, Georgian Bay, Tadenac Lake ES

(next page)

Potassium
7440-09-7
K
AtW 39.098, MP 63.2 C, BP 765.5 C, VP 100 mm Hg at 590 C

Otter
LUTRA CANADENSIS

(continued)

Tissue	Cases Exposure Route	Range	Mean	General Information
5030 Liver	4 Ingestion	Not given	2162+/-205 ug/g	Undisturbed watershed. Sp[ecimens from fur trapper. Canada, Ontario, Georgian Bay, Tadenac Lake ES
BEAVERS; OTTERS; RACCOONS; CANADA; BIOACCUMULATION; BIOMAGNIFICATION; SELENIUM; IRON; COPPER; CADMIUM; CALCIUM; ALUMINUM; MAGNESIUM; MANGANESE; SODIUM; NICKEL; PHOSPHORUS; ZINC; POTASSIUM; DETOXIFICATION; DIETS; LIVER; KIDNEYS; INTESTINES; MUSCLES; AQUATIC; TERRESTRIAL; ENVIRONMENTAL EXPOSURE; BIOLOGICAL MONITORING				
Wren, C.D. 1984 Science of the Total Environment 34:177-184				

Pollock, walleye
THERAGRA CHALCOGRAMMA

Tissue	Cases Exposure Route	Range	Mean	General Information
5031 Muscle	Ingestion	a) Not given b) Not given c) Not given d) Not given	a) 2245+/-352 ug/g b) 2282+/-568 ug/g c) 3938+/-102 ug/g d) 274+/-33.2 mg/100 g Wet wt	a) Caught in Bering Sea, AK, 20 fish, mean wt 965+/-352 g b) Shelik of Strait, AK, 10 fish, 1300+/-488 g c) Cape Ommaney, AK, 12 fish, 325+/-223 g. Low levels, means below FDA action level for food contamination. Pacific Ocean ES
FISHES; BIOLOGICAL MONITORING; PACIFIC OCEAN; ALUMINUM; BARIUM; CALCIUM; CHROMIUM; COPPER; IRON; MERCURY; POTASSIUM; LITHIUM; MAGNESIUM; MANGANESE; SODIUM; PHOSPHORUS; STRONTIUM; ZINC; AQUATIC; ENVIRONMENTAL EXPOSURE; WATER POLLUTION; FOOD CONTAMINATION; MUSCLES				
Teeny, F.M.; Gauglitz, E.J., Jr.; Hall, A.S.; Houle, C.R. 1984 Journal of Agricultural and Food Chemistry 32:852-855				

Pomfret
BRAMA JAPONICA

Tissue	Cases Exposure Route	Range	Mean	General Information
5032 Muscle	24 Ingestion	Not given	3115+/-619 ug/g Wet wt	Gulf of Alaska. Mean wt 1088+/-162 g Pacific Ocean ES
FISHES; BIOLOGICAL MONITORING; PACIFIC OCEAN; ALUMINUM; BARIUM; CALCIUM; CHROMIUM; COPPER; IRON; MERCURY; POTASSIUM; LITHIUM; MAGNESIUM; MANGANESE; SODIUM; PHOSPHORUS; STRONTIUM; ZINC; AQUATIC; ENVIRONMENTAL EXPOSURE; WATER POLLUTION; FOOD CONTAMINATION; MUSCLES				
Teeny, F.M.; Gauglitz, E.J., Jr.; Hall, A.S.; Houle, C.R. 1984 Journal of Agricultural and Food Chemistry 32:852-855				

Potassium
7440-09-7
K
AtW 39.098, MP 63.2 C, BP 765.5 C, VP 100 mm Hg at 590 C

Raccoon
PROCYON LOTOR

Tissue	Cases Exposure Route	Range	Mean	General Information
5033 Kidney	4 Ingestion	Not given	2172+/-108 ug/g	Undisturbed watershed. Specimens from fur trapper. Canada, Ontario, Georgian Bay, Tadenac Lake ES
5034 Liver	4 Ingestion	Not given	1897+/-40 ug/g	Undisturbed watershed. Specimens from fur trapper. Canada, Ontario, Georgian Bay, Tadenac Lake ES

BEAVERS; OTTERS; RACCOONS; CANADA; BIOACCUMULATION; BIOMAGNIFICATION; SELENIUM; IRON; COPPER; CADMIUM; CALCIUM; ALUMINUM; MAGNESIUM; MANGANESE; SODIUM; NICKEL; PHOSPHORUS; ZINC; POTASSIUM; DETOXIFICATION; DIETS; LIVER; KIDNEYS; INTESTINES; MUSCLES; AQUATIC; TERRESTRIAL; ENVIRONMENTAL EXPOSURE; BIOLOGICAL MONITORING

Wren, C.D. 1984 Science of the Total Environment 34:177-184

Shad, American
ALOSA SAPIDISSIMA

Tissue	Cases Exposure Route	Range	Mean	General Information
5035 Muscle	13 Ingestion	Not given	2443+/-387 ug/g Wet wt	Near Seaside, OR. Mean wt 1039+/-251 g Pacific Ocean ES

FISHES; BIOLOGICAL MONITORING; PACIFIC OCEAN; ALUMINUM; BARIUM; CALCIUM; CHROMIUM; COPPER; IRON; MERCURY; POTASSIUM; LITHIUM; MAGNESIUM; MANGANESE; SODIUM; PHOSPHORUS; STRONTIUM; ZINC; AQUATIC; ENVIRONMENTAL EXPOSURE; WATER POLLUTION; FOOD CONTAMINATION; MUSCLES

Teeny, F.M.; Gauglitz, E.J., Jr.; Hall, A.S.; Houle, C.R. 1984 Journal of Agricultural and Food Chemistry 32:852-855

Sheep
OVIS sp.

Tissue	Cases Exposure Route	Range	Mean	General Information
5036 Blood, plasma	4 Intraruminal	a) 17.3-18.6 mg b) 18.0-19.5 mg c) 18.4-36.1 mg d) 18.2-36.8 mg /100 ml Range of means	a) Not given b) Not given c) Not given d) Not given	a) Controls, 0 time, 500 ml water, thermoneutral (20 C) temperature b) Water, exposure to cold (0-5C) c) 1.5 g/kg KCl, thermoneutral temperature d) 1.5 g/kg KCl, cold temperature Measurements from 4 animals at 0, 1, 2, 3, 4 hr after treatment. Crossbred wethers avg 39.4+/-4.8 kg body wt were fed a low-Mg diet (MgO, 16.6 mg/kg) at 1.5% of body wt once daily. Each subjected to 4 treatments in a 4x4 Latin square design. Levels correlated with plasma glucose, insulin, and catecholamines. AAS

SHEEP; MAGNESIUM; BLOOD PLASMA; TERRESTRIAL; DELIBERATE EXPOSURE; UNITED STATES; NUTRITIONAL DEFICIENCIES; COMPARATIVE EVALUATIONS; DIETS; POTASSIUM; CALCIUM

Terashima, Y.; Tucker, R.E.; Deetz, L.E.; Muntifering, R.B.; Mitchell, G.E., Jr. 1984 Nutrition Reports International 29(4):869-875

Potassium
7440-09-7
K
AtW 39.098, MP 63.2 C, BP 765.5 C, VP 100 mm Hg at 590 C

Sheep
OVIS sp.

Tissue	Cases Exposure Route	Range	Mean	General Information
5037 Blood, serum	a) 16 b) 16 c) 16	a) Not given b) Not given c) Not given	a) 5.3 mmol/l b) 5.3 mmol/l c) 5.5 mmol/l +/-0.1 S.E.	Lambs whose dams had basal diet fortified with cottonseed meal for 2 yr b) Same as a), basal diet plus 7% undigested sewage solids c) Same as a), basal diet Did not differ from controls. New Mexico AAS
KIDNEYS; LIVER; BONES; SHEEP; TERRESTRIAL; ENVIRONMENTAL EXPOSURE; DELIBERATE EXPOSURE; NEW MEXICO; CADMIUM; CHROMIUM; COPPER; IRON; MERCURY; NICKEL; LEAD; ZINC; METALS; ANIMAL FEEDS; AGRICULTURE; BIOACCUMULATION; BIOLOGICAL MONITORING; FARMS; FOOD CONTAMINATION; LAND POLLUTION; SEWAGE; CALCIUM; BLOOD SERUM; MAGNESIUM; POTASSIUM; PHOSPHORUS; SODIUM Hudgens, R.E.; Hallford, D.M. 1984]utrition Reports International 29(1):11-21				

Tissue	Cases Exposure Route	Range	Mean	General Information
5038 Kidney	a) 20 b) 19 Ingestion	a) 2.04-2.68 g/kg b) 1.81-2.37 g/kg Wet wt	a) 2.28 g/kg b) 2.06 g/kg Wet wt Medians	a) Males and females <1 yr old b) Females 1-7.5 yr old Inversely correlated with age. Naturally occurring and fallout radionuclides. West Germany, Lueneburg heath AAS
5039 Liver	40 Ingestion	2.22-3.21 g/kg Wet wt	2.69 g/kg Wet wt Median	0.5-7.5 yr olds. Naturally occurring and fallout radionuclides. West Germany, Lueneburg heath AAS
5040 Muscle	a) 20 b) 19 Ingestion	a) 2.30-3.21 g/kg b) 3.10-3.60 g/kg Wet wt	a) 3.06 g/kg b) 3.34 g/kg Wet wt Medians	a) Males and females <1 yr old b) Females 1-7.5 yr old High, direct correlation with age. Naturally occurring and fallout radionu-clides. West Germany, Lueneburg heath AAS
LAND POLLUTION; ENVIRONMENTAL EXPOSURE; AIR POLLUTION; SHEEP; GERMANY; TERRESTRIAL; BIOLOGICAL MONITORING; LIVER; KIDNEYS; MUSCLES; BIOACCUMULATION; BIOCONCENTRATION; JUVENILES; ADULTS; SEX; RADIONUCLIDES; LEAD; CESIUM; POLONIUM; POTASSIUM; FOOD CONTAMINATION; FALL-OUT Bunzl, K.; Kracke, W. 1984 Science of the Total Environment 39:143-159				

Potassium
7440-09-7
K
AtW 39.098, MP 63.2 C, BP 765.5 C, VP 100 mm Hg at 590 C
Silkworm
BOMBYX MORI

Tissue	Cases Exposure Route	Range	Mean	General Information
5041 Alimentary canal	Ingestion	a) Not given b) Not given	a) 4360+/-499 ug/g b) 7980+/-1280 ug/g Dry wt	a) Controls b) Treatment After diet containing no (controls), or 80 ug Cd/g wet wt, fed from hatching until 6th day of 5th instar. Japan AAS
5042 Fat body	Ingestion	a) Not given b) Not given	a) 187+/-40 ug/g b) 360+/-59 ug/g Dry wt	a) Controls b) Treatment After diet containing no (controls), or 80 ug Cd/g wet wt, fed from hatching until 6th day of 5th instar. Japan AAS
5043 Gonads	Ingestion	a) Not given b) Not given	a) 10,800 ug/g b) 13,900 ug/g	a) Controls b) Treatment After diet containing no (controls), or 80 ug Cd/g wet wt, fed from hatching until 6th day of 5th instar. Japan AAS
5044 Head	Ingestion	a) Not given b) Not given	a) 10,300+/-2580 ug/g b) 14,900+/-752 ug/g Dry wt	a) Controls b) Treatment After diet containing no (controls), or 80 ug Cd/g wet wt, fed from hatching until 6th day of 5th instar. Japan AAS
5045 Integument	Ingestion	a) Not given b) Not given	a) 988+/-417 ug/g b) 750+/-213 ug/g Dry wt	a) Controls b) Treatment After diet containing no (controls), or 80 ug Cd/g wet wt, fed from hatching until 6th day of 5th instar. Japan AAS
5046 Malpighian tubes	Ingestion	a) Not given b) Not given	a) 3140+/-451 ug/g b) 11,700+/-1700 ug/g Dry wt	a) Controls b) Treatment After diet containing no (controls), or 80 ug Cd/g wet wt, fed from hatching until 6th day of 5th instar. Japan AAS

(next page)

Potassium
7440-09-7
K
AtW 39.098, MP 63.2 C, BP 765.5 C, VP 100 mm Hg at 590 C

Silkworm
BOMBYX MORI

(continued)

Tissue	Cases Exposure Route	Range	Mean	General Information
5047 Silk gland	Ingestion	a) Not given b) Not given	a) 5730+/-1170 ug/g b) 8350+/-676 ug/g Dry wt	a) Controls b) Treatment After diet containing no (controls), or 80 ug Cd/g wet wt, fed from hatching until 6th day of 5th instar. Japan AAS
5048 Trachea	Ingestion	a) Not given b) Not given	a) 423+/-131 ug/g b) 623+/-67 ug/g Dry wt	a) Controls b) Treatment After diet containing no (controls), or 80 ug Cd/g wet wt, fed from hatching until 6th day of 5th instar. Japan AAS

SILK GLAND; HEAD; TRACHEA; MALPIGHIAN TUBES; GASTROINTESTINAL TRACT; GONADS; FAT BODY; INTEGUMENT; DELIBERATE EXPOSURE; SILKWORMS; TERRESTRIAL; JAPAN; METAL POISONING; METALS; CADMIUM; ZINC; COPPER; CALCIUM; IRON; MAGNESIUM; MANGANESE; ALUMINUM; SODIUM; POTASSIUM; BIOACCUMULATION
Suzuki, K.T.; Aoki, Y.; Nishikawa, M.; Masui, H.; Matsubara, F. 1984 Comparative Biochemistry and Physiology 79C(2):249-253

Sole, Dover
MICROSTOMUS PACIFICUS

Tissue	Cases Exposure Route	Range	Mean	General Information
5049 Muscle	Ingestion	a) Not given b) Not given c) Not given d) Not given	a) 1735+/-606 ug/g b) 3081+/-181 ug/g c) 1970+/-602 ug/g d) 208+/-51.2 mg/100 g Wet wt	a) Caught near Newport, OR, 29 fish, mean wt 660+/-326 g b) Cape Ommaney, AK, 11 fish, 506+/-214 g c) Santa Cruz, CA, 10 fish, 212+/-68 g d) Overall mean, combined sites. Low levels, means below FDA action level for food contamination. Pacific Ocean ES

FISHES; BIOLOGICAL MONITORING; PACIFIC OCEAN; ALUMINUM; BARIUM; CALCIUM; CHROMIUM; COPPER; IRON; MERCURY; POTASSIUM; LITHIUM; MAGNESIUM; MANGANESE; SODIUM; PHOSPHORUS; STRONTIUM; ZINC; AQUATIC; ENVIRONMENTAL EXPOSURE; WATER POLLUTION; FOOD CONTAMINATION; MUSCLES
Teeny, F.M.; Gauglitz, E.J., Jr.; Hall, A.S.; Houle, C.R. 1984 Journal of Agricultural and Food Chemistry 32:852-855

Potassium
7440-09-7
K
AtW 39.098, MP 63.2 C, BP 765.5 C, VP 100 mm Hg at 590 C
Whiting, Pacific
MERLUCCIUS PRODUCTUS

Tissue	Cases Exposure Route	Range	Mean	General Information
5050 Muscle	a) 20 b) 32 Ingestion	a) Not given b) Not given	a) 1979+/-644 ug/g b) 2438+/-486 ug/g Wet wt	a) Near Astoria, OR, mean wt 873+/-246 g b) Refrigerated 2 d in seawater, Astoria, OR, 937+/-227 g. Low levels, means below FDA action level for food contamination. Pacific Ocean ES
FISHES; BIOLOGICAL MONITORING; PACIFIC OCEAN; ALUMINUM; BARIUM; CALCIUM; CHROMIUM; COPPER; IRON; MERCURY; POTASSIUM; LITHIUM; MAGNESIUM; MANGANESE; SODIUM; PHOSPHORUS; STRONTIUM; ZINC; AQUATIC; ENVIRONMENTAL EXPOSURE; WATER POLLUTION; FOOD CONTAMINATION; MUSCLES Teeny, F.M.; Gauglitz, E.J., Jr.; Hall, A.S.; Houle, C.R. 1984 Journal of Agricultural and Food Chemistry 32:852-855				

Pregna-1,4-diene-3,20-dione, 11beta,17,21-trihydroxy- (8 CI); Pregna-1,4-diene-3,20-dione, 11,17,21-trihydroxy-, (11beta)- (9 CI)
50-24-8
C21-H28-O5
MW 360.44, MP 240-241 C (decomp)
Cattle
BOS sp.

Tissue	Cases Exposure Route	Range	Mean	General Information
5051 Blood, serum	10 Injection	a) 140-100 dpm/ml b) 125-100 dpm/ml c) 1400-100 dpm/ml d) 1150-90 dpm/ml	a) Not applicable b) Not applicable c) Not applicable d) Not applicable	a) Controls, 0.5-7 hr, peak (230 dpm/ml) 2 hr after 10 mg intramammary, 6 cases b) Experimentally infected udders, 0.5-7 hr, peak (210 dpm/ml) 2 hr after 10 mg intramammary, 6 cases c) Controls, 0-7 hr, peak (1400 dpm/ml) immediately after 40 mg IV, 4 cases d) Experimentally infected udders, 0-7 hr, peak (1150 dpm/ml) immediately after 40 mg IV, 4 cases Estimated from graph, ranges of means. Scintillation counting
5052 Milk	10 Injection	a) 2.6-0.9% b) 0.9-3.4% c) 0.06-0.19% d) 0.05-0.05%	a) 5.0+/-2.7% b) 2.0+/-0.9% c) 0.13+/-0.05% d) 0.05+/-0.0%	a) Normal, intramammary, 6 cases b) Infected, intramammary, 6 cases c) Normal, IV, 4 cases d) Infected, IV, 3 cases % recovery 4 d after 40 mg. 10 mg/udder quarter given intramammary. Each udder quarter experimentally infected with STREPTOCOCCUS AGALACTIAE inoculum. Scintillation counting

(next page)

Pregna-1,4-diene-3,20-dione, 11beta,17,21-trihydroxy- (8 CI); Pregna-1,4-diene-3,20-dione, 11,17,21-trihydroxy-, (11beta)- (9 CI)
50-24-8
C21-H28-O5
MW 360.44, MP 240-241 C (decomp)

Cattle
BOS sp.

(continued)

Tissue	Cases Exposure Route	Range	Mean	General Information
5053 Urine	10 Injection	a) 18.0-42.2% b) 18.1-30.2% c) 41.2-52.6% d) 29.1-60.6%	a) 29.6+/-10.5% b) 25.4+/-6.4% c) 46.0+/-5.5% d) 42.6+/-16.2%	a) Normal, intramammary, 6 cases b) Infected, intramammary, 6 cases c) Normal, IV, 4 cases d) Infected, IV, 3 cases % recovery 4 d after 40 mg. 10 mg/udder quarter given intramammary. Each udder quarter experimentally infected with STREPTOCOCCUS AGALACTIAE inoculum. Scintillation counting
BLOOD SERUM; MILK; URINE; CATTLE; TERRESTRIAL; DELIBERATE EXPOSURE; ADULTS; INFECTION; ANTIINFLAMMATORY AGENTS; DRUGS; DRUG THERAPY; CORTICOSTEROIDS; BIOACCUMULATION; RADIONUCLIDES; LACTATION Geleta, J.N.; Shimoda, W.; Mercer, H.D. 1984 American Journal of Veterinary Research 45(8):1576-1581				

Progesterone (8 CI); Pregn-4-ene-3,20-dione (9 CI)
57-83-0
C21-H30-O2
MW 314.45, MP 127-131 C (alpha), 121 C (beta)

Chicken
GALLUS sp.

Tissue	Cases Exposure Route	Range	Mean	General Information
5054 Blood, plasma	23 Injection	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given g) Not given h) Not given	a) 2.72+/-1.69 ng/ml b) 1.07+/-0.76 ng/ml c) 1.51+/-1.50 ng/ml d) 3.76+/-2.74 ng/ml e) 0.185+/-0.081 ng/ml f) 1.25+/-0.53 ng/ml g) 0.344+/-0.353 ng/ml h) 3.42+/-1.57 ng/ml	a) Controls, 5 adults, 0 d b) Control 5 adults, 14 d c) Treatment, 5 adults, 0 d d) Treatment, 5 adults, 14 d e) Control, 6 juveniles, 0 d f) Control, 6 juveniles, 14 d g) Treatment, 7 juveniles, 0 d h) Treatment, 7 juveniles, 14 d Dose was 4 mg/kg/d for 14 d. Controls given propylene glycol (solvent). Illinois RIA
BLOOD PLASMA; DELIBERATE EXPOSURE; ILLINOIS; AGE; ADULTS; JUVENILES; HORMONES; BIOACCUMULATION; BIRDS; TERRESTRIAL Hagan, R.C.; Leszczynski, D.E.; Kummerow, F.A. 1984 Toxicology and Applied Pharmacology 76:483-489				

Progesterone (8 CI); Pregn-4-ene-3,20-dione (9 CI)

57-83-0
C21-H30-O2
MW 314.46, MP 127-131 C (alpha), 121 C (beta)

Swine
SUS sp.

Tissue	Cases Exposure Route	Range	Mean	General Information
5055 Blood				Review. Clinical applications of prostaglandins. Chemistry, physiologic effects, endrocrinology, reproduction management, therapeutic uses, side effects discussed.

BLOOD; SWINE; TERRESTRIAL; REVIEW; HORMONES; DRUGS; DRUG THERAPY; BIOACCUMULATION; PREGNANCY
Dial, G.D. 1984 Journal of American Veterinary Medical Association 185(12):1523-1530

Propionanilide, 3',4'-dichloro- (8 CI); Propanamide, N-(3,4-dichlorophenyl)- (9 CI)

709-98-8
C9-H9-Cl2-N-O
MW 218.09, MP 91-93 C, BP 91-91.5 C, VP 9X10(E-5) mm Hg at 60 C

Minnow, fathead
PIMEPHALES PROMELAS

Tissue	Cases Exposure Route	Range	Mean	General Information
5056 Body		a) 1.2-1.5 ng/g b) 0.5-0.0 ng/g c) 2.5-2.9 ng/g d) 1.9-1.4 ng/g log concentrations	a) Not given b) Not given c) Not given d) Not given	a) Mean water level 0.34+/-0.2 ug/L, uptake phase, 0-17 d b) Lower exposure depuration phase, 19-28 d c) Mean water level 5.1+/-0.2 ug/L, uptake phase, 0-17 d d) Higher exposure depuration phase, 19-28 d Exposed in flow-through diluter system to mixture of technical grade and radiolabeled compound for bioconcentration test using 30 day old fish Estimated from graph. Wisconsin TLC

BODY; AQUATIC; FATHEAD MINNOWS; DELIBERATE EXPOSURE; ENVIRONMENTAL EXPOSURE; HERBICIDES; AGRICULTURE; BIOACCUMULATION; FISHES; BIOCONCENTRATION
Call, D.J.; Brooke, L.T.; Kent, R.J.; Knuth, M.L.; Anderson, C.; Moriarity, C. 1983 Archives of Environmental Contamination and Toxicology 12:175-182

Propionic acid (8 CI); Propanoic acid (9 CI)
79-09-4
C3-H6-O2
MW 74.08, MP -20.8 C, also reported as -21.5 C, BP 140.99 C at 760 mm Hg, also reported as 141.1 C at 760 mm Hg, VP 10 mm Hg at 40 C
Cattle
BOS sp.

Tissue	Cases Exposure Route	Range	Mean	General Information
5057 Blood, plasma	Injection	a) Not given b) Not given	a) 0.04 nmole/l b) 0.23 nmole/l	a) Controls b) Infusion pulses Pulses also elevated plasma insulin 3-fold and slightly decreased plasma glucose. Dosage not given. Scotland

BLOOD PLASMA; DELIBERATE EXPOSURE; CATTLE; SCOTLAND; BIOACCUMULATION; LACTATION; ANIMAL FEEDS
Istasse, L.; Orskov, E.R. 1984 Canadian Journal of Animal Science 64:148-49

Propionic acid, 3-nitro- (8 CI); Propanoic acid, 3-nitro- (9 CI)
504-88-1
C3-H5-N-O4
MW 119.09
Cattle
BOS sp.

Tissue	Cases Exposure Route	Range	Mean	General Information
5058 Blood, plasma	5 Ingestion	a) 12-3 nmol/ml b) 28-15 nmol/ml c) 27-8 nmol/ml	a) Not applicable b) Not applicable c) Not applicable	a) 15-240 min, peak (50 nmol/ml) 60 min after dose, 3 cases b) 15-240 min, disconnected cannulae, peak (55 nmol/l) 30 min after dose, 2 cases c) 15-240 min, connected cannulae, peak (38 nmol/l) 30 min after dose, 2 cases Dose was timber milkvetch powder equivalent to 20 mg 3-nitropropanol/kg intraruminal. Disconnected cannulae prevented passage of digesta from abomasum to duodenum. Estimated from graph. Canada HPLC

BLOOD PLASMA; CATTLE; TERRESTRIAL; DELIBERATE EXPOSURE; CANADA; SURGERY; ACCIDENTAL POISONING; BIOACCUMULATION; FOOD CONTAMINATION; ANIMAL FEEDS; FARMS; VEGETATION
Majak, W.; Pass, M.A.; Muir, A.D.; Rode, L.M. 1984 Toxicology Letters 23:9-15

Propionic acid, 3-nitro- (8 CI); Propanoic acid, 3-nitro- (9 CI)
504-88-1
C3-H5-N-O4
MW 119.09
Sheep
OVIS sp.

Tissue	Cases Exposure Route	Range	Mean	General Information
5059 Blood, plasma	19 Injection	a) 20-12 nmol/ml b) 50-10 nmol/ml c) 10-8 nmol/ml d) 25-4 nmol/ml e) 80-8 nmol/ml f) 100-1 nmol/ml g) 45-4 nmol/ml	a) Not applicable b) Not applicable c) Not applicable d) Not applicable e) Not applicable f) Not applicable g) Not applicable	a) 15-180 min, peak (25 nmol/ml) 30 min after dose to rumen b) 15-180 min, peak (50 nmol/ml) 15 min, 3-nitropropanol to rumen c) 15-120 min, peak (14 nmol/ml) 30 min, dose to abomasum d) 15-120 min, peak (25 nmol/ml) 15 min, 3-nitropropanol to abomasum e) 15-120 min, peak (80 nmol/ml) 15 min, dose to small intestine f) 15-120 min, peak (100 nmol/ml) 15 min, 3-nitropropanol small intestine g) 15-60 min, peak (45 nmol/ml) 15 min, 3-nitropropanol to caecum, 1 case a) -f) 3 cases. Dose was 10 mg/kg. HPLC

BLOOD PLASMA; DELIBERATE EXPOSURE; SHEEP; ADULTS; SURGERY; AGRICULTURE; ANIMAL POPULATIONS; ACCIDENTAL POISONING; BIOACCUMULATION; HEALTH HAZARDS; VEGETATION; TERRESTRIAL

Pass, M.A.; Majak, W.; Muir, A.D.; Yost, G.S. 1984 Toxicology Letters 23:1-7

Pyridine, 4-amino- (8 CI); 4-Pyridinamine (9 CI)
504-24-5
C5-H6-N2
MW 94.12, MP 158-159 C, BP 180 C
Cattle
BOS sp.

Tissue	Cases Exposure Route	Range	Mean	General Information
5060 Blood, plasma	6 Injection	170-6 ng/ml	Not applicable	0.08-8 hr, peak (170 ng/ml) immediately after 0.3 mg/kg IV. Georgia GLC

BLOOD PLASMA; CATTLE; TERRESTRIAL; DELIBERATE EXPOSURE; GEORGIA; NEUROLOGIC MANIFESTATIONS; DRUGS; DRUG THERAPY; STIMULANTS; BIOACCUMULATION

Kitzman, J.V.; Wilson, R.C.; Booth, N.H.; Zahner, J.M.; Hendricks, L.; Bush, P.B. 1984 American Journal of Veterinary Research 45(12):2625-2627

Relaxin
9002-69-1
EXACT COMPOSITION UNKNOWN OR UNDETERMINED
MW 5,000-10,000
Swine
SUS sp.

Tissue	Cases Exposure Route	Range	Mean	General Information
5061 Blood				Review. Clinical applications of prostaglandins. Chemistry, physiologic effects, endrocrinology, reproduction management, therapeutic uses, side effects discussed.
BLOOD; SWINE; TERRESTRIAL; REVIEW; HORMONES; DRUGS; DRUG THERAPY; BIOACCUMULATION; PREGNANCY				
Dial, G.D. 1984 Journal of American Veterinary Medical Association 185(12):1523-1530				

Retinol, acetate, all-trans- (8 CI); Retinol, acetate (9 CI)
127-47-9
C22-H32-O2
Quail, Japanese
COTURNIX COTURNIX JAPONICA

Tissue	Cases Exposure Route	Range	Mean	General Information
5062 Egg, yolk	a) 1 b) 1 c) 1 d) 1 e) 2 Ingestion	a) Not given b) Not given c) Not given d) Not given e) Not given	a) 4.5+/-0.23 ug/yolk b) 2.2+/-1.0 ug/yolk c) 1.7+/-0.37 ug/yolk d) 3.8+/-0.34 ug/yolk e) 6.2+/-0.7 ug/yolk	a) 5000 IU/kg, 12 wk b) 2500 IU/kg, 12 wk c) 2500 IU/kg and 2.5 mg retinoic acid, 12 wk d) 5000 IU/kg and 2.5 mg retinoic acid, 12 wk e) 5000 IU/kg, 5 wk Diet with indicated amounts Vitamin A (and retinoic acid), and birds were indicated ages. 3 eggs/sample. Retinoic acid had no effect on Vitamin A yolk levels. Kansas
5063 Liver	a) 1 b) 1 c) 1 d) 1 e) 1 f) 1 g) 1 h) 2 Ingestion	a) Not applicable b) Not applicable c) Not applicable d) Not applicable e) Not applicable f) Not applicable g) Not applicable h) Not applicable	a) 105 ug/liver b) 56 ug/liver c) 17 ug/liver d) 5 ug/liver e) 118 ug/liver f) 65 ug/liver g) 80 ug/liver h) 4.9+/-1.4 ug/liver	a) 5000 IU/kg, male b) 5000 IU/kg, female c) 2500 IU/kg, male d) 2500 IU/kg, female e) 5000 IU/kg and 2.5 mg retinoic acid, male f) 5000 IU/kg and 2.5 mg retinoic acid, female g) 5000 IU/kg, male h) 5000 IU/kg, females a) -f), 12 wk old specimens, g) was 8 wk old, h), 5 wk old. Diet with indicated amounts Vitamin A. Females excreted Vitamin A in eggs, hence lower storage levels in liver. Birds fed 1-5 mg retinoic acid had undetectable levels of Vitamin A in livers. Kansas
LIVER; EGGS; QUAIL; DELIBERATE EXPOSURE; KANSAS; VITAMINS; VITAMIN A; ANIMAL FEEDS; BIOACCUMULATION; TERRESTRIAL; BIRDS				
Parrish, D.B. 1984 Nutrition Reports International 29(3):647-654				

Rubidium
7440-17-7
Rb
AtW 85.4678, MP 39 C, BP 688 C, VP 10 mm Hg at 390 C

Cattle
BOS sp.

Tissue	Cases Exposure Route	Range	Mean	General Information
5064 Hair	Ingestion	Not given	0.94 ppm	Data from one representative site. Deposition of elements on pasture. Collected Oct-Nov 1981-2. 5 yr old cows, 10 samples/farm, 9-14 farms, 7-12 sites. Significantly correlated with bulk deposition. Belgium NA

CATTLE; HAIR; BIOLOGICAL MONITORING; AIR POLLUTION; LAND POLLUTION; ARSENIC; BARIUM; BROMINE; CERIUM; COBALT; CHROMIUM; CESIUM; IRON; POTASSIUM; LANTHANUM; SODIUM; RUBIDIUM; ANTIMONY; SCANDIUM; SELENIUM; SAMARIUM; THORIUM; ZINC; FOOD CONTAMINATION; BIOACCUMULATION; BIOCONCENTRATION; TERRESTRIAL; ENVIRONMENTAL EXPOSURE; TRACE ELEMENTS

Ronneau, C.; Cara, J. 1984 Science of the Total Environment 39:135-142

s-Triasine, 2-chloro-4-(ethylamino)-6-(isopropylamino)- (8 CI); 1,3,5-Triasine-2,4-diamine, 6-chloro-N-ethyl-N'-(1-methylethyl)- (9 CI)
1912-24-9
C8-H14-Cl-N5
MW 215.06, MP 171-174 C, VP 3.0X10(E-7) mm Hg at 20 C

Amphipod
GAMMURUS PSEUDOLIMNAEUS

Tissue	Cases Exposure Route	Range	Mean	General Information
5065 Body		a) Not given b) Not given c) Not given d) Not given	a) 0.41 ug/g b) 0.33 ug/g c) 3.02 ug/g d) 1.38 ug/g	a) Day 5 b) Day 30 c) Day 5 d) Day 16 Treatment phase, 25 ug/L, for 30 days, a)-b) spring, c)-d) summer. No levels found in winter or fall or during depuration phase, 60 days following treatment Not bioaccumulated. Samples collected on days 5, 10, 20 and 30 of treatment phase. Scintillation counting did not detect residues. Michigan GLC

BODY; FISHES; CRAYFISH; AMPHIPODS; SNAILS; MAYFLIES; EARTHWORMS; CLAMS; AQUATIC; DELIBERATE EXPOSURE; MICHIGAN; BIOACCUMULATION; POLYCHLORINATED BIPHENYLS; HERBICIDES; WATER POLLUTION

Lynch, T.R.; Johnson, H.E.; Adams, W.J. 1982 Environmental Toxicology and Chemistry 1:179-192

s-Triazine, 2-chloro-4-(ethylamino)-6-(isopropylamino)- (8 CI); 1,3,5-Triazine-2,4-diamine, 6-chloro-N-ethyl-N'-(1-methylethyl)- (9 CI)
1912-24-9
C8-H14-Cl-N5
MW 216.06, MP 171-174 C, VP 3.0X10(E-7) mm Hg at 20 C

Clam
STROPHITIS RUGOSUS

Tissue	Cases Exposure Route	Range	Mean	General Information
5066 Body		a) Not given b) Not given c) Not given	a) 0.05 ug/g b) 0.06 ug/g c) 0.19 ug/g	a) Day 30, winter b) Day 30, spring c) Day 15, summer Treatment phase, 25 ug/L, for 30 days. No levels found in fall or during depuration phase, 60 days following treatment Not bioaccumulated. Samples collected on day 30. Largest level reported during treatment phase. Michigan GLC

BODY; FISHES; CRAYFISH; AMPHIPODS; SNAILS; MAYFLIES; EARTHWORMS; CLAMS; AQUATIC; DELIBERATE EXPOSURE; MICHIGAN; BIOACCUMULATION; POLYCHLORINATED BIPHENYLS; HERBICIDES; WATER POLLUTION
Lynch, T.R.; Johnson, H.E.; Adams, W.J. 1982 Environmental Toxicology and Chemistry 1:179-192

Crayfish
ORONECTES sp.

Tissue	Cases Exposure Route	Range	Mean	General Information
5067 Body		a) Not given b) Not given c) Not given	a) 0.88 ug/g b) 2.40 ug/g c) 0.51 ug/g	a) Day 15, fall b) Day 30, winter c) Day 15, summer Treatment phase, 25 ug/L, for 30 days. No levels found in spring or during depuration phase, 60 days following treatment Not bioaccumulated. Samples collected on days 15 and 30. Largest level reported during treatment phase. Michigan GLC

BODY; FISHES; CRAYFISH; AMPHIPODS; SNAILS; MAYFLIES; EARTHWORMS; CLAMS; AQUATIC; DELIBERATE EXPOSURE; MICHIGAN; BIOACCUMULATION; POLYCHLORINATED BIPHENYLS; HERBICIDES; WATER POLLUTION
Lynch, T.R.; Johnson, H.E.; Adams, W.J. 1982 Environmental Toxicology and Chemistry 1:179-192

s-Triazine, 2-chloro-4-(ethylamino)-6-(isopropylamino)- (8 CI); 1,3,5-Triazine-2,4-diamine, 6-chloro-N-ethyl-N'-(1-methylethyl)- (9 CI)
1912-24-9
C8-H14-Cl-N5
MW 216.06, MP 171-174 C, VP 3.0X10(E-7) mm Hg at 20 C

Earthworm, aquatic
LUMBRICULIDAE

Tissue	Cases Exposure Route	Range	Mean	General Information
5068 Body		a) Not given b) Not given	a) 84.0 ug/g b) 0.87 ug/g	a) Day 5 b) Day 16 Treatment phase, 25 ug/L, for 30 days, a)-b) summer. No levels found in winter, spring or fall or during depuration phase, 60 days following treatment Not bioaccumulated. Samples collected on days 5, 10, 20 and 30 of treatment phase. Scintillation counting did not detect residues. Michigan GLC

BODY; FISHES; CRAYFISH; AMPHIPODS; SNAILS; MAYFLIES; EARTHWORMS; CLAMS; AQUATIC; DELIBERATE EXPOSURE; MICHIGAN; BIOACCUMULATION; POLYCHLORINATED BIPHENYLS; HERBICIDES; WATER POLLUTION
Lynch, T.R.; Johnson, H.E.; Adams, W.J. 1982 Environmental Toxicology and Chemistry 1:179-192

Mayfly
BAETIS sp.

Tissue	Cases Exposure Route	Range	Mean	General Information
5069 Body		a) Not given b) Not given	a) 3.4 ug/g b) 2.8 ug/g	a) Day 10 b) Day 30 Treatment phase, 25 ug/L, for 30 days, a)-b) spring. No levels found in winter or fall or during depuration phase. 60 days following treatment Not bioaccumulated. Samples collected on days 5, 10, 20 and 29 of treatment phase. Scintillation counting did not detect residues. Michigan GLC

BODY; FISHES; CRAYFISH; AMPHIPODS; SNAILS; MAYFLIES; EARTHWORMS; CLAMS; AQUATIC; DELIBERATE EXPOSURE; MICHIGAN; BIOACCUMULATION; POLYCHLORINATED BIPHENYLS; HERBICIDES; WATER POLLUTION
Lynch, T.R.; Johnson, H.E.; Adams, W.J. 1982 Environmental Toxicology and Chemistry 1:179-192

s-Triazine, 2-chloro-4-(ethylamino)-6-(isopropylamino)- (8 CI); 1,3,5-Triazine-2,4-diamine, 6-chloro-N-ethyl-N'-(1-methylethyl)- (9 CI)
1912-24-9
C8-H14-Cl-N5
MW 216.06, MP 171-174 C, VP 3.0X10(E-7) mm Hg at 20 C

Sculpin, mottled
COTTUS BAIRDI

Tissue	Cases Exposure Route	Range	Mean	General Information
5070 Body		a) Not given b) Not given c) Not given	a) 2.40 ug/g b) 0.18 ug/g c) 0.25 ug/g	a) Day 30, winter b) Day 30, spring c) Day 15, summer Treatment phase, 25 ug/L, for 30 days. No levels found in fall or during depuration phase, 60 days following treatment Not bioaccumulated. Samples collected on days 15 and 30. Largest level reported during treatment phase. Michigan GLC

BODY; FISHES; CRAYFISH; AMPHIPODS; SNAILS; MAYFLIES; EARTHWORMS; CLAMS; AQUATIC; DELIBERATE EXPOSURE; MICHIGAN; BIOACCUMULATION; POLYCHLORINATED BIPHENYLS; HERBICIDES; WATER POLLUTION
Lynch, T.R.; Johnson, H.E.; Adams, W.J. 1982 Environmental Toxicology and Chemistry 1:179-192

Snail
PHYSA sp.

Tissue	Cases Exposure Route	Range	Mean	General Information
5071 Body		a) Not given b) Not given	a) 0.15 ug/g b) 0.13 ug/g	a) Day 5 b) Day 16 Treatment phase, 25 ug/L, for 30 days, a) spring, b) summer. No levels found in winter or fall or during depuration phase, 60 days following treatment Not bioaccumulated. Samples collected on days 5, 10, 20 and 30 of treatment phase. Scintillation counting did not detect residues. Michigan GLC

BODY; FISHES; CRAYFISH; AMPHIPODS; SNAILS; MAYFLIES; EARTHWORMS; CLAMS; AQUATIC; DELIBERATE EXPOSURE; MICHIGAN; BIOACCUMULATION; POLYCHLORINATED BIPHENYLS; HERBICIDES; WATER POLLUTION
Lynch, T.R.; Johnson, H.E.; Adams, W.J. 1982 Environmental Toxicology and Chemistry 1:179-192

s-Triazine, 2-chloro-4-(ethylamino)-6-(isopropylamino)- (8 CI); 1,3,5-Triazine-2,4-diamine, 6-chloro-N-ethyl-N'-(1-methylethyl)- (9 CI)
1912-24-9
C8-H14-Cl-N5
MW 216.06, MP 171-174 C, VP 3.0X10(E-7) mm Hg at 20 C

Stonefly
NEMOURIDAE

Tissue	Cases Exposure Route	Range	Mean	General Information
5072 Body		a) Not given b) Not given c) Not given	a) 0.93 ug/g b) 0.73 ug/g c) 1.04 ug/g	a) Day 30 b) Day 5 c) Day 20 Treatment phase, 25 ug/L, for 30 days, a) spring, b)-c) summer. No levels found in winter or fall or during depuration phase, 60 days following treatment Not bioaccumulated. Samples collected on days 5, 10, 20 and 30 of treatment phase. Scintillation counting did not detect residues. Michigan GLC

BODY; FISHES; CRAYFISH; AMPHIPODS; SNAILS; MAYFLIES; EARTHWORMS; CLAMS; AQUATIC; DELIBERATE EXPOSURE; MICHIGAN; BIOACCUMULATION; POLYCHLORINATED BIPHENYLS; HERBICIDES; WATER POLLUTION

Lynch, T.R.; Johnson, H.E.; Adams, W.J. 1982 Environmental Toxicology and Chemistry 1:179-192

Samarium
7440-19-9
Sm
AtW 150.4, MP 1072 C, BP 1778 C

Cattle
BOS sp.

Tissue	Cases Exposure Route	Range	Mean	General Information
5073 Hair	Ingestion	Not given	0.030 ppm	Data from one representative site. Deposition of elements on pasture. Collected Oct-Nov 1981-2. 5 yr old cows, 10 samples/farm, 9-14 farms, 7-12 sites. Significantly correlated with bulk deposition. Belgium NA

CATTLE; HAIR; BIOLOGICAL MONITORING; AIR POLLUTION; LAND POLLUTION; ARSENIC; BARIUM; BROMINE; CERIUM; COBALT; CHROMIUM; CESIUM; IRON; POTASSIUM; LANTHANUM; SODIUM; RUBIDIUM; ANTIMONY; SCANDIUM; SELENIUM; SAMARIUM; THORIUM; ZINC; FOOD CONTAMINATION; BIOACCUMULATION; BIOCONCENTRATION; TERRESTRIAL; ENVIRONMENTAL EXPOSURE; TRACE ELEMENTS

Ronneau, C.; Cara, J. 1984 Science of the Total Environment 39:135-142

Scandium
7440-20-2
Sc
AtW 44.9559, MP 1538 C, BP 2832 C

Cattle
BOS sp.

Tissue	Cases Exposure Route	Range	Mean	General Information
5074 Hair	Ingestion	Not given	0.010 ppm	Data from one representative site. Deposition of elements on pasture. Collected Oct-Nov 1981-2. 5 yr old cows, 10 samples/farm, 9-14 farms, 7-12 sites. Significantly correlated with bulk deposition. Belgium NA

CATTLE; HAIR; BIOLOGICAL MONITORING; AIR POLLUTION; LAND POLLUTION; ARSENIC; BARIUM; BROMINE; CERIUM; COBALT; CHROMIUM; CESIUM; IRON; POTASSIUM; LANTHANUM; SODIUM; RUBIDIUM; ANTIMONY; SCANDIUM; SELENIUM; SAMARIUM; THORIUM; ZINC; FOOD CONTAMINATION; BIOACCUMULATION; BIOCONCENTRATION; TERRESTRIAL; ENVIRONMENTAL EXPOSURE; TRACE ELEMENTS

Ronneau, C.; Cara, J. 1984 Science of the Total Environment 39:135-142

Selenium
7782-49-2
Se
AtW 78.96, MP 170-217 C, BP 685 C, VP 1 mm Hg at 356 C, 10 mm Hg at 429 C

Beaver
CASTOR CANADENSIS

Tissue	Cases Exposure Route	Range	Mean	General Information
5075 Intestine	4 Ingestion	Not given	0.04+/-0.02 ug/g	Undisturbed watershed. Specimens from fur trapper. Canada, Ontario, Georgian Bay, Tadenac Lake AAS
5076 Kidney	4 Ingestion	Not given	0.9+/-0.3 ug/g	Undisturbed watershed. Specimens from fur trapper. Canada, Ontario, Georgian Bay, Tadenac Lake AAS
5077 Liver	4 Ingestion	Not given	0.2+/-0.0 ug/g	Undisturbed watershed. Specimens from fur trapper. Se and Hg levels positively correlated. Canada, Ontario, Georgian Bay, Tadenac Lake AAS
5078 Muscle	4 Ingestion	Not given	0.09+/-0.03 ug/g	Undisturbed watershed. Specimens from fur trapper. Canada, Ontario, Georgian Bay, Tadenac Lake AAS

BEAVERS; OTTERS; RACCOONS; CANADA; BIOACCUMULATION; BIOMAGNIFICATION; SELENIUM; IRON; COPPER; CADMIUM; CALCIUM; ALUMINUM; MAGNESIUM; MANGANESE; SODIUM; NICKEL; PHOSPHORUS; ZINC; POTASSIUM; DETOXIFICATION; DIETS; LIVER; KIDNEYS; INTESTINES; MUSCLES; AQUATIC; TERRESTRIAL; ENVIRONMENTAL EXPOSURE; BIOLOGICAL MONITORING

Wren, C.D. 1984 Science of the Total Environment 34:177-184

Selenium
7782-49-2
Se
AtW 78.96, MP 170-217 C, BP 685 C, VP 1 mm Hg at 356 C, 10 mm Hg at 429 C

Catfish, channel
ICTALURUS PUNCTATUS

Tissue	Cases Exposure Route	Range	Mean	General Information
5079 Muscle	a) 3 b) 3 c) 3 d) 3 e) 3 f) 3 g) 3 Ingestion	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given g) Not given	a) 0.07+/-0.01 ug/g b) 0.11+/-0.01 ug/g c) 0.29+/-0.01 ug/g d) 0.45+/-0.02 ug/g e) 1.55+/-0/16 ug/g f) 3.03+/-0.26 ug/g g) 3.49+/-0.08 ug/g Dry wt S.E.	a) 0 mg/kg b) 0.1 mg/kg c) 0.5 mg/kg d) 1.0 mg/kg e) 5.0 mg/kg f) 10.0 mg/kg g) 15.0 mg/kg Concentration of added supplement Na2SeO3. a) basal diet initially contained 0.06 mg/kg. Dry diet. Fingerlings. Fed diet at rate of 3% body wt/d. Concentrations increased almost linearly with supplementation. Minimum requirement was 0.25 mg/kg dry diet when vitamin E was adequate (from results of a 2nd experiment). Mississippi Basal diet and highest level caused growth depression. Liver and plasma glutathione peroxidase activities varied with amount Se in diet Fluorometry
FISHES; SELENIUM; DIETS; MUSCLES; MISSISSIPPI; AQUATIC; DELIBERATE EXPOSURE; ENZYMES; VITAMIN E				
Gatlin, D.M.; Wilson, R.P. 1984 Journal of Nutrition 114:627-633				

Cattle
BOS sp.

Tissue	Cases Exposure Route	Range	Mean	General Information
5080 Blood	65 Injection	a) Not given b) Not given c) Not given d) Not given e) Not given	a) 0.108+/-0.005 ug/ml b) 0.109+/-0.004 ug/ml c) 0.117+/-0.004 ug/ml d) 0.129+/-0.003 ug/ml e) 0.134+/-0.003 ug/ml S.E.	a) Controls at 21 d before calving b) 14 d before calving and 7 d post-calving c) 14 d post-calving d) Treated with 50 mg Se and 680 IU Vit E, IM 14 d before calving e) 7 and 14 d post-calving, same dose. Holstein cows and heifers. Treatment increased levels significantly. Age, time of calving (season), and number of pregnancies affected levels. Control and treated groups had similar levels prior to treatment. Louisiana, Franklin Flurometry
SELENIUM; DIETS; CATTLE; FERTILITY; LACTATION; TERRESTRIAL; AGE; BLOOD; DELIBERATE EXPOSURE; LOUISIANA				
Kappel, L.C.; Ingraham, R.H.; Morgan, E.B.; Dixon, J.M.; Zeringue, L.; Wilson, D.; Babcock, D.K. 1984 American Journal of Veterinary Research 45(4):691-694				

Selenium
7782-49-2
Se
AtW 78.96, MP 170-217 C, BP 685 C, VP 1 mm Hg at 356 C, 10 mm Hg at 429 C

Cattle
BOS sp.

Tissue	Cases Exposure Route	Range	Mean	General Information
5081 Blood	a) 8 b) 8 c) 8 d) 8 e) 8 f) 8 Ingestion	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given	a) 0.250+/-0.014 mg/kg b) 0.242+/-0.009 mg/kg c) 0.162+/-0.012 mg/kg d) 0.175+/-0.010 mg/kg e) 0.052+/-0.052 mg/kg f) 0.081+/-0.007 mg/kg	a) Se-adequate, standard diet with soybean oil meal (0.313 mg/kg Se) and salt mineral mix with 90 mg/kg Se b) Calves of a) c) Se-deficient, same diet as a) with Se-free salt-mineral mix d) Calves of c) e) Se-deficient, standard diet, no soybean oil meal with Se-free salt-mineral mix f) Calves of e) At parturition. 20 mo old Hereford heifers and calves. Significant differences a) from c) and e), b) from d) and f), c) from e) and d) from f), p<0.01. Idaho, University of Idaho
BLOOD; MILK; TERRESTRIAL; CATTLE; IDAHO; TRACE ELEMENTS; SELENIUM; COMPARATIVE EVALUATIONS; TRANSPLACENTAL TRANSFER; DRUGS; DELIBERATE EXPOSURE Koller, L.D.; Whitbeck, G.A.; South, P.J. 1984 American Journal of Veterinary Research 45(12):2507-2510				

Tissue	Cases Exposure Route	Range	Mean	General Information
5082 Blood, cells	23 Ingestion	a) 0.6+/-0.15-0.5+/-0.06 umol/l b) 0.7+/-0.22-1.2+/-0.06 umol/l c) 0.5+/-0.13-2.0+/-0.57 umol/l d) 0.6+/-0.14-1.9+/-0.17 umol/l	a) Not applicable b) Not applicable c) Not applicable d) Not applicable	a) Controls, 0-47 wks, plateau during study, 8 cases b) 2 bullets/case, 0-47 wks, peak (3.4+/-0.68 umol/l) at 19 wks, 5 cases c) 4 bullets/case, 0-47 wks, peak (4.6+/-0.81 umol/l) at 19 wks, 5 cases d) 6 bullets/case, 0-47 wks, peak (4.9+/-0.17 umol/l) at 19 wks, 5 cases Each bullet weighed 30 g, contained 10%. No toxic accumulation. Standard dose is 2 bullets/animal. Australia
5083 Blood, plasma	23 Ingestion	a) 0.26+/-0.044-0.23+/-0.021 umol/l b) 0.31+/-0.054-0.38+/-0.046 umol/l c) 0.29+/-0.056-0.50+/-0.117 umol/l d) 0.32+/-0.050-0.56+/-0.087 umol/l	a) Not applicable b) Not applicable c) Not applicable d) Not applicable	a) Controls, 0-47 wks, plateau during study, 8 cases b) 2 bullets/case, 0-47 wks, peak (0.73+/-0.174 umol/l) at 8 wks, 5 cases c) 4 bullets/case, 0-47 wks, peak (1.16+/-0.227 umol/l) at 8 wks, 5 cases d) 6 bullets/case, 0-47 wks, peak (1.06+/-0.277 umol/l) at 8 wks, 5 cases Each bullet weighed 30 g, contained 10% Se. No toxic accumulation. Standard dose, 2 bullet/animal. Australia
BLOOD PLASMA; BLOOD; BLOOD CELLS; CATTLE; DELIBERATE EXPOSURE; AUSTRALIA; SELENIUM; BIOACCUMULATION; DRUGS Judson, G.J.; McFarlane, J.D. 1984 Australian Veterinary Journal 61(10): 333				

Selenium
7782-49-2
Se
AtW 78.96, MP 170-217 C, BP 685 C, VP 1 mm Hg at 356 C, 10 mm Hg at 429 C

Cattle
BOS sp.

Tissue	Cases Exposure Route	Range	Mean	General Information
5084 Blood, plasma	a) 10 b) 10 c) 10 d) 10	a) 0.018-0.025 ppm b) 0.036-0.050 ppm c) 0.017-0.024 ppm d) 0.033-0.052 ppm	a) 0.022 ppm b) 0.045 ppm c) 0.020 ppm d) 0.040 ppm	a) Controls b) Injected with 15 mg Se every 28 d c) Fed S-supplement with 11.25 g/d d) Fed S-supplement and injected with Se 257 kg steer calves grazing tall fescue. Average daily gains increased and blood amino acids decreased in b). No Se-S interaction. Kentucky Fluorimetry

BLOOD PLASMA; STEERS; TERRESTRIAL, DELIBERATE EXPOSURE; SELENIUM; SULFUR; ANIMAL FEEDS; AGRICULTURE; VEGETATION
Smith, S.I.; Boling, J.A.; Gay, N.; Cantor, A.H. 1984 Biological Trace Element Research 6:347-356

Tissue	Cases Exposure Route	Range	Mean	General Information
5085 Blood, serum	a) 8 b) 5 Injection	a) 0.027-0.038 mg/L b) 0.032-0.057 mg/L	a) 0.032+/-0.004 mg/L b) 0.043+/-0.010 mg/L	a) No supplement b) IM supplements of 25 and 35 mg as sodium salt plus vitamin E Holstein dairy cows deficient in Se. Levels significantly greater in b). Wisconsin White muscle disease observed in calves from these cows. Treatment increased red blood cell glutathione peroxidase activity significantly.

CATTLE; WISCONSIN; BLOOD; SERUM; LEUKOCYTES; DIETS; DELIBERATE EXPOSURE; TERRESTRIAL
Gyang, E.O.; Stevens, J.B.; Olson, W.G.; Tsitsamis, S.D.; Usenik, E.A. 1984 American Journal of Veterinary Research 45(1):175-177

Tissue	Cases Exposure Route	Range	Mean	General Information
5086 Blood, serum	a) 20 b) 23 c) 29 d) 6 e) 6 f) 4 g) 4 Ingestion	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given	a) 0.022 +or- 0.005 ppm b) 0.035 +or- 0.010 ppm c) 0.070 +or-0.090 ppm d) 0.052 ppm e) 0.097 ppm f) 0.080 ppm g) 0.015 ppm	a) No supplement b) 1.0 mg/hd/day supplement for 5 mo c) 3.5 mg/hd/day supplement for 5 mo d) Pre-wild range pasture 5-11/78 e) Post-wild range pasture 5-11/78 f) Pre-fertilized/irrigated pasture 5-6/79 g) Post-fertilized/irrigated pasture 5-6/79 3.5 mg/hd/day for 5 mo prior to pasture d)-g) Canada, British Columbia, SE, Windermere Valley Fluorometry

CATTLE; ANIMAL FEEDS; DIETS; PREGNANCY; CANADA; NEWBORN; BLOOD SERUM; SELENIUM
Penimore, R.L.; Adams, D.S.; Puls, R. 1983 The Canadian Veterinary Journal 24(2):41-45

Selenium
7782-49-2
Se
AtW 78.96, MP 170-217 C, BP 685 C, VP 1 mm Hg at 356 C, 10 mm Hg at 429 C

Cattle
BOS sp.

Tissue	Cases Exposure Route	Range	Mean	General Information
5087 Blood, whole	23 Ingestion	a) 0.37+/-0.076-0.35+/-0.026 umol/l b) 0.44+/-0.090-0.69+/-0.045 umol/l c) 0.40+/-0.075-1.07+/-0.270 umol/l d) 0.44+/-0.084-1.05+/-0.093 umol/l	a) Not applicable b) Not applicable c) Not applicable d) Not applicable	a) Controls, 0-47 wks, plateau during study, 8 cases b) 2 bullets/case, 0-47 wks, peak (1.47+/-0.203 umol/l) at 19 wks, 5 cases c) 4 bullets/case, 0-47 wks, peak (2.05+/-0.442 umol/l) at 19 wks, 5 cases d) 6 bullets/case, 0-47 wks, peak (3.12+/-0.202 umol/l) at 19 wks, 5 cases Each bullet weighed 30 g, contained 10%. No toxic accumulation. Standard dose, 2 bullets/animal. Australia

BLOOD PLASMA; BLOOD; BLOOD CELLS; CATTLE; DELIBERATE EXPOSURE; AUSTRALIA; SELENIUM; BIOACCUMULATION; DRUGS
Judson, G.J.; McFarlane, J.D. 1984 Australian Veterinary Journal 61(10): 333

Tissue	Cases Exposure Route	Range	Mean	General Information
5088 Hair	Ingestion	Not given	0.13 ppm	Data from one representative site. Deposition of elements on pasture. Collected Oct-Nov 1981-2. 5 yr old cows, 10 samples/farm, 9-14 farms, 7-12 sites. Significantly correlated with bulk deposition. Belgium NA

CATTLE; HAIR; BIOLOGICAL MONITORING; AIR POLLUTION; LAND POLLUTION; ARSENIC; BARIUM; BROMINE; CERIUM; COBALT; CHROMIUM; CESIUM; IRON; POTASSIUM; LANTHANUM; SODIUM; RUBIDIUM; ANTIMONY; SCANDIUM; SELENIUM; SAMARIUM; THORIUM; ZINC; FOOD CONTAMINATION; BIOACCUMULATION; BIOCONCENTRATION TERRESTRIAL; ENVIRONMENTAL EXPOSURE; TRACE ELEMENTS
Ronneau, C.; Cara, J. 1984 Science of the Total Environment 39:135-142

Tissue	Cases Exposure Route	Range	Mean	General Information
5089 Kidney	178	0.73-3.20 mg/kg Wet wt	1.52 +or- 0.40 mg/kg Wet wt	From abattoirs in 10 selected 100-sq km areas representing a cross-section of industries. Australia, Queensland AAS
5090 Liver	178	0.02-0.55 mg/kg Wet wt	0.25 +or- 0.10 mg/kg Wet wt	From abattoirs in 10 selected 100-sq km areas representing a cross-section of industries. Australia, Queensland AAS

CATTLE; AUSTRALIA; KIDNEYS; LIVER; MUSCLES; ARSENIC; CADMIUM; CHROMIUM; COPPER; LEAD; MERCURY; SELENIUM; ZINC; BIOACCUMULATION; INDUSTRIAL AREAS
Kramer, H.L.; Steiner, J.W.; Vallely, P.J. 1983 Bulletin of Environmental Contamination and Toxicology 30:588-594

Selenium
7782-49-2
Se
AtW 78.96, MP 170-217 C, BP 685 C, VP 1 mm Hg at 356 C, 10 mm Hg at 429 C

Cattle
BOS sp.

Tissue	Cases Exposure Route	Range	Mean	General Information
5091 Milk	24 Ingestion	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given	a) 0.124+/-0.010 mg/kg b) 0.037+/-0.005 mg/kg c) 0.070+/-0.021 mg/kg d) 0.025+/-0.008 mg/kg e) 0.052+/-0.008 mg/kg f) 0.009+/-0.002 mg/kg	a) Colostrum, Se-adequate, standard diet with soybean oil meal (0.318 mg/kg Se), salt-mineral mix with 90 mg/kg Se, 8 cases b) Milk at 1 wk, same 8 as a) c) Colostrum, Se deficient, same diet as a) with Se-free salt mix, 8 cases d) Milk at 1 wk, same 8 as c) e) Colostrum, Se-deficient, standard diet without soybean oil meal, with Se-free salt-mineral mix, 8 cases f) Milk at 1 wk, same 8 as e) 20 mo old Hereford heifers. Significant differences a) from c) and e), c) from e), a) from b), c) from d) and e) from f), p</=0.01. Idaho, University of Idaho

BLOOD; MILK; TERRESTRIAL; CATTLE; IDAHO; TRACE ELEMENTS; SELENIUM; COMPARATIVE EVALUATIONS; TRANSPLACENTAL TRANSFER; DRUGS; DELIBERATE EXPOSURE
Koller, L.D.; Whitbeck, G.A.; South, P.J. 1984 American Journal of Veterinary Research 45(12):2507-2510

Tissue	Cases Exposure Route	Range	Mean	General Information
5092 Muscle	180	<0.02-0.30 mg/kg Wet wt	0.12 +or- 0.17 mg/kg Wet wt	From abattoirs in 10 selected 100-sq km areas representing a cross-section of industries. 8 samples below detection limit. Australia, Queensland AAS

CATTLE; AUSTRALIA; KIDNEYS; LIVER; MUSCLES; ARSENIC; CADMIUM; CHROMIUM; COPPER; LEAD; MERCURY; SELENIUM; ZINC; BIOACCUMULATION; INDUSTRIAL AREAS
Kramer, H.L.; Steiner, J.W.; Vallely, P.J. 1983 Bulletin of Environmental Contamination and Toxicology 30:588-594

Selenium
7782-49-2
Se
AtW 78.96, MP 170-217 C, BP 685 C, VP 1 mm Hg at 356 C, 10 mm Hg at 429 C

Chicken
GALLUS GALLUS

Tissue	Cases Exposure Route	Range	Mean	General Information
5093 Blood, plasma	a) 5 b) 5 c) 5 d) 5 e) 12 f) 12 g) 12 h) 12 Ingestion	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given g) Not given h) Not given	a) 0.122 ppm b) 0.228 ppm c) 0.285 ppm d) 0.346 ppm e) 0.122 ppm f) 0.151 ppm g) 0.156 ppm h) 0.150 ppm	a) Controls, tap water ($<$0.005 ppm Se) for 14 d, Single Comb White Leghorn b) 1 mg/L Se in drinking water for 14 d c) 2 mg/L d) 4 mg/L e) Controls, tap water for 14 d, broiler chicks f) 2 mg/L in drinking water for 7 d. Tap water for next 7 d g) 4 mg/L, same regimen as f) h) 8 mg/L, same regimen as f) Significant differences: d) from a), b), & c). c) from a) & b). b) & a). g) from f) & e). f) from e), $p<0.05$. Food intake, wt gain decreased at highest dose Fluorimetry
BLOOD PLASMA; CHICKENS; TERRESTRIAL; DELIBERATE EXPOSURE; TRACE ELEMENTS; DRUGS; SELENIUM				
Cantor, A.H.; Nash, D.M.; Johnson, T.H. 1984 Nutrition Reports International 29(3):683-688				

Dolphin, striped
STENELLA COERULEOALBA

Tissue	Cases Exposure Route	Range	Mean	General Information
5094 Adipose	a) 18 b) 6	a) Not given b) Not given	a) 1.4+/-0.8 ug/g b) 2.22+/-0.72 ug/g Wet wt	a) Mature animals collected 1977-80 b) Immature animals collected 1977-78 Maturity defined as females having ovaries with corpora lutea or albicans, or males having testes of 15.5 g or more. Pacific Ocean AAS
5095 Blood	9	Not given	0.87+/-0.19 ug/g	Mature animals collected 1977-80. Pacific Ocean AAS
5096 Brain	a) 7 b) 7	a) Not given b) Not given	a) 3.7+/-2.4 ug/g b) 0.85+/-0.33 ug/g Wet wt	a) Cerebrum b) Cerebellum Mature animals collected in 1977-80. Pacific Ocean AAS
5097 Diaphragm	15	Not given	1.8+/-1.0 ug/g Wet wt	Mature animals collected 1977-80. Pacific Ocean AAS

(next page)

Selenium
7782-49-2
Se
AtW 78.96, MP 170-217 C, BP 685 C, VP 1 mm Hg at 356 C, 10 mm Hg at 429 C

Dolphin, striped
STENELLA COERULEOALBA

(continued)

Tissue	Cases Exposure Route	Range	Mean	General Information
5098 Heart	a) 15 b) 4	a) Not given b) Not given	a) 2.7+/-1.2 ug/g b) 3.08+/-0.84 ug/g Wet wt	a) Mature animals collected 1977-80 b) Immature animals collected 1977-78 Maturity defined as females having ovaries with corpora lutea or albicans, or males having testes of 15.5 g or more. Pacific Ocean AAS
5099 Intestine	15	Not given	2.0+/-0.6 ug/g Wet wt	Mature animals collected 1977-80. Pacific Ocean AAS
5100 Kidney	a) 14 b) 5	a) Not given b) Not given	a) 5.6+/-2.2 ug/g b) 5.82+/-0.94 ug/g Wet wt	a) Mature animals collected 1977-80 b) Immature animals collected 1977-78 Maturity defined as females having ovaries with corpora lutea or albicans, or males having testes of 15.5 g or more. Pacific Ocean AAS
5101 Liver	a) 15 b) 6	a) Not given b) Not given	a) 48.6+/-28.7 ug/g b) 1.97+/-1.03 ug/g Wet wt	a) Mature animals collected 1977-80 b) Immature animals collected 1977-78 Maturity defined as females having ovaries with corpora lutea or albicans, or males having testes of 15.5 g or more. Pacific Ocean AAS
5102 Lung	15	Not given	5.1+/-2.5 ug/g Wet wt	Mature animals collected 1977-80. Pacific Ocean AAS
5103 Muscle	a) 26 b) 6	a) Not given b) Not given	a) 2.8+/-2.2 ug/g b) 0.88+/-0.25 ug/g Wet wt	a) Mature animals collected 1977-80 b) Immature animals collected 1977-78 Maturity defined as females having ovaries with corpora lutea or albicans, or males having testes of 15.5 g or more. Pacific Ocean AAS
5104 Pancreas	a) 14 b) 5	a) Not given b) Not given	a) 4.8+/-3.1 ug/g b) 1.44+/-0.34 ug/g Wet wt	a) Mature animals collected 1977-80 b) Immature animals collected 1977-78 Maturity defined as females having ovaries with corpora lutea or albicans, or males having testes of 15.5 g or more. Pacific Ocean AAS

(next page)

Selenium
7782-49-2
Se
AtW 78.96, MP 170-217 C, BP 685 C, VP 1 mm Hg at 356 C, 10 mm Hg at 429 C

Dolphin, striped
STENELLA COERULEOALBA

(continued)

Tissue	Cases Exposure Route	Range	Mean	General Information
5105 Spleen	a) 14 b) 5	a) Not given b) Not given	a) 5.8+/-2.7 ug/g b) 3.34+/-0.82 ug/g Wet wt	a) Mature animals collected 1977-80 b) Immature animals collected 1977-78 Maturity defined as females having ovaries with corpora lutea or albicans, or males having testes of 15.5 g or more. Pacific Ocean AAS
5106 Stomach	20	a) Not given b) Not given c) Not given	a) 2.2+/-0.8 ug/g b) 3.5+/-1.3 ug/g c) 1.62+/-0.72 ug/g Wet wt	a) First stomach, mature animals collected 1977-80, 15 cases b) Second stomach, mature animals collected 1977-80, 15 cases c) First stomach, immature animals collected 1977-78, 5 cases Maturity defined as females having ovaries with corpora lutea or albicans, or males having testes of 15.5 g or more. Pacific Ocean AAS

ADIPOSE TISSUE; MUSCLES; PANCREAS; SPLEEN; KIDNEYS; LIVER; STOMACH; INTESTINES; LUNGS; DIAPHRAGM; BRAIN; BLOOD; DOLPHINS; AQUATIC; ENVIRONMENTAL EXPOSURE; PACIFIC OCEAN; JUVENILES; ADULTS; MERCURY; METHYLMERCURY; SELENIUM; METALS; BIOACCUMULATION; WATER POLLUTION

Itano, K.; Kawai, S.; Miyazaki, N.; Tatsukawa, R.; Fujiyama, T. 1984 Agricultural Biology and Chemistry 48(5):1109-1116

Otter
LUTRA CANADENSIS

Tissue	Cases Exposure Route	Range	Mean	General Information
5107 Intestine	4 Ingestion	Not given	1.1+/-0.8 ug/g	Undisturbed watershed. Specimens from fur trapper. Canada, Ontario, Georgian Bay, Tadenac Lake AAS
5108 Kidney	4 Ingestion	Not given	1.9+/-0.2 ug/g	Undisturbed watershed. Specimens from fur trapper. Canada, Ontario, Georgian Bay, Tadenac Lake AAS
5109 Liver	4 Ingestion	Not given	2.1+/-0.3 ug/g	Undisturbed watershed. Specimens from fur trapper. Positive correlation of Hg and Se levels might be due to protective mechanism against methyl-ercury toxicity. Hg data published previously. Bioaccumulation could be occurring. Tissue with highest level. Canada, Ontario, Georgian Bay, Tadenac Lake AAS
5110 Muscle	4 Ingestion	Not given	0.2+/-0.1 ug/g	Undisturbed watershed. Specimens from fur trapper. Canada, Ontario, Georgian Bay, Tadenac Lake AAS

BEAVERS; OTTERS; RACCOONS; CANADA; BIOACCUMULATION; BIOMAGNIFICATION; SELENIUM; IRON; COPPER; CADMIUM; CALCIUM; ALUMINUM; MAGNESIUM; MANGANESE; SODIUM; NICKEL; PHOSPHORUS; ZINC; POTASSIUM; DETOXIFICATION; DIETS; LIVER; KIDNEYS; INTESTINES; MUSCLES; AQUATIC; TERRESTRIAL; ENVIRONMENTAL EXPOSURE; BIOLOGICAL MONITORING

Wren, C.D. 1984 Science of the Total Environment 34:177-184

Selenium
7782-49-2
Se
AtW 78.96, MP 170-217 C, BP 685 C, VP 1 mm Hg at 356 C, 10 mm Hg at 429 C

Pike, northern
ESOX LUCIUS

Tissue	Cases Exposure Route	Range	Mean	General Information
5111 Body	a) 14 b) 8	a) Not given b) Not given	a) 0.17+/-0.04 ug/g b) 0.12+/-0.02 ug/g	a) Captured 7/26/79, fork length 14.4+/-2.4 cm, weight 19.49+/-9.23 g b) 8/8/79, 19.4+/-1.7 cm, 44.49+/-9.13 g. Canada, Ontaria, Clay Lake AAS
5112 Liver	a) 14 b) 8	a) Not given b) Not given	a) 0.79+/-0.21 ug/g b) 0.99+/-0.20 ug/g	a) Captured 7/26/79, fork length 14.4+/-2.4 cm, weight 19.49+/-9.28 g b) 8/8/79, 19.4+/-1.7 cm, 44.49+/-9.13 g. Canada, Ontaria, Clay Lake AAS

BODY; LIVER; AQUATIC; FISHES; DELIBERATE EXPOSURE; ENVIRONMENTAL EXPOSURE; ONTARIO; CANADA; BIOACCUMULATION; MERCURY; SELENIUM; WATER POLLUTION
Klaverkamp, J.F.; Hodgins, D.A.; Lutz, A. 1983 Archives of Environmental Contamination and Toxicology 12:405-413

Raccoon
PROCYON LOTOR

Tissue	Cases Exposure Route	Range	Mean	General Information
5113 Kidney	4 Ingestion	Not given	1.9+/-0.4 ug/g	Undisturbed watershed. Specimens from fur trapper. Positive correlation of Hg and Se levels might be due to protective mechanism against methylmercury toxicity. Bioaccumulation could be occurring. Tissue with highest level. Canada, Ontario, Georgian Bay, Tadenac Lake AAS
5114 Liver	4 Ingestion	Not given	2.8+/-1.2 ug/g	Undisturbed watershed. Specimens from fur trapper. Positive correlation of Hg and Se levels might be due to protective mechanism against methylmercury toxicity. Bioaccumulation could be occurring. Tissue with highest level. Canada, Ontario, Georgian Bay, Tadenac Lake AAS
5115 Muscle	4 Ingestion	Not given	0.2+/-0.1 ug/g	Undisturbed watershed. Specimens from fur trapper. Positive correlation of Hg and Se levels might be due to protective mechanism against methylmercury toxicity. Bioaccumulation could be occurring. Tissue with highest level. Canada, Ontario, Georgian Bay, Tadenac Lake AAS

BEAVERS; OTTERS; RACCOONS; CANADA; BIOACCUMULATION; BIOMAGNIFICATION; SELENIUM; IRON; COPPER; CADMIUM; CALCIUM; ALUMINUM; MAGNESIUM; MANGANESE; SODIUM; NICKEL; PHOSPHORUS; ZINC; POTASSIUM; DETOXIFICATION; DIETS; LIVER; KIDNEYS; INTESTINES; MUSCLES; AQUATIC; TERRESTRIAL; ENVIRONMENTAL EXPOSURE; BIOLOGICAL MONITORING
Wren, C.D. 1984 Science of the Total Environment 34:177-184

Selenium
7782-49-2
Se
AtW 78.96, MP 170-217 C, BP 685 C, VP 1 mm Hg at 356 C, 10 mm Hg at 429 C

Seal, harp
PHOCA GROENLANDICA

Tissue	Cases Exposure Route	Range	Mean	General Information
5116 Blood	a) 2 b) 1 c) 4 Ingestion	a) Not applicable b) Not applicable c) 1.17-1.8 mg/kg Wet wt	a) 0.55+/-0.21 mg/kg b) 0.8+/-0.0 mg/kg Wet wt	a) Adult males, Gulf of St. Lawrence b) Juvenile males, Grise fiord, Pangnirtung, Greenland c) Females, Grise fiord, Pangnirtung, Greenland Range of means. 1976-78 annual hunt. Statistical analyses included age, sex, site, elements, tissue/organ levels. Accumulated with age. Levels correlated with Hg (r=0.39). Canada; Greenland; Atlantic Ocean; Arctic Fluorometry
5117 Brain	a) 12 b) 12 c) 3 d) 1 e) 2 f) 1 Ingestion	a) 0.31-0.55 mg/kg b) 0.36-0.50 mg/kg c) 0.50-0.70 mg/kg d) Not applicable e) 0.40-0.50 mg/kg f) Not applicable Wet wt	a) Not applicable b) Not applicable c) Not applicable d) 0.70 mg/kg e) Not applicable f) 0.50 mg/kg Wet wt	a) Males, Gulf of St. Lawrence b) Females, Gulf of St. Lawrence c) Males, front ice off Newfoundland, Labrador d) Juvenile female, front ice off Newfoundland, Labrador e) Males Grise fiord, Pangnirtung, Greenland f) Adult female, Grise fiord, Pangnirtung, Greenland Range of means. 1976-78 annual hunt. Statistical analyses included age, sex, site, elements, tissue/organ levels. Accumulated with age. Levels correlated with Hg (r=0.42). Canada; Greenland; Atlantic Ocean; Arctic Fluorometry
5118 Kidney	a) 19 b) 18 c) 4 d) 5 e) 7 f) 9 Ingestion	a) 1.84-3.27 mg/kg b) 1.88-2.87 mg/kg c) 2.47-2.60 mg/kg d) Not applicable e) 2.30-3.32 mg/kg f) 3.79-4.40 mg/kg Wet wt	a) Not applicable b) Not applicable c) Not applicable d) 2.46+/-0.97 mg/kg e) Not applicable f) Not applicable Wet wt	a) Males, Gulf of St. Lawrence b) Females, Gulf of St. Lawrence c) Males, front ice off Newfoundland, Labrador d) Female, front ice off Newfoundland, Labrador e) Males, Grise fiord, Pangnirtung, Greenland f) Females, Grise fiord, Pangnirtung, Greenland Range of means. 1976-78 annual hunt. Statistical analyses included age, sex, site, elements, tissue/organ levels. Accumulated with age. Canada; Greenland; Atlantic Ocean; Arctic Fluorometry

(next page)

Selenium
7782-49-2
Se
AtW 78.96, MP 170-217 C, BP 685 C, VP 1 mm Hg at 356 C, 10 mm Hg at 420 C

Seal, harp
PHOCA GROENLANDICA

(continued)

Tissue	Cases Exposure Route	Range	Mean	General Information
5119 Liver	a) 22 b) 25 c) 13 d) 10 e) 8 f) 11 Ingestion	a) 1.02-7.02 mg/kg b) 1.01-5.78 mg/kg c) 1.77-7.75 mg/kg d) 2.30-6.00 mg/kg e) 1.50-2.83 mg/kg f) 1.48-12.1 mg/kg Wet wt	a) Not applicable b) Not applicable c) Not applicable d) Not applicable e) Not applicable f) Not applicable	a) Males, Gulf of St. Lawrence b) Females, Gulf of St. Lawrence c) Males, front ice off Newfoundland, Labrador d) Female, front ice off Newfoundland, Labrador e) Males, Grise fiord, Pangnirtung, Greenland f) Females, Grise fiord, Pangnirtung, Greenland Range of means. 1976-78 annual hunt. Statistical analyses included age, sex, site, elements, tissue/organ levels. Accumulated with age. Levels correlated with Hg (r=0.87), and Cd (r=0.56). Canada; Greenland; Northwest Atlantic; Arctic Fluorometry
5120 Muscle	a) 17 b) 20 c) 7 d) 3 e) 2 f) 1 Ingestion	a) 0.58-0.68 mg/kg b) 0.56-0.59 mg/kg c) 0.57-0.60 mg/kg d) 0.40-0.55 mg/kg e) Not applicable f) Not applicable Wet wt	a) Not applicable b) Not applicable c) Not applicable d) Not applicable e) 0.5 mg/kg f) 0.5+/-0.0 mg/kg Wet wt	a) Males, Gulf of St. Lawrence b) Females, Gulf of St. Lawrence c) Males, front ice off Newfoundland, Labrador d) Female, front ice off Newfoundland, Labrador e) Males, Grise fiord, Pangnirtung, Greenland f) Pup female, Grise fiord, Pangnirtung, Greenland Range of means. 1976-78 annual hunt. Statistical analyses included age, sex, site, elements, tissue/organ levels.Accumulated with age. Canada; Greenland; Northwest Atlantic; Arctic Fluorometry

SEALS; CADMIUM; LEAD; MERCURY; SELENIUM; COPPER; BIOACCUMULATION; BIOLOGICAL MONITORING; CANADA; GREENLAND; BLOOD; KIDNEYS; MUSCLES; LIVER; BRAIN; AGE; ARCTIC; ATLANTIC; SEX; AQUATIC; ENVIRONMENTAL EXPOSURE; WATER POLLUTION

Ronald, K.; Frank, R.J.; Dougan, J.L.; Frank, R.; Braun, H.E. 1984 Science of the Total Environment 38:156-166

Sheep
OVIS sp.

Tissue	Cases Exposure Route	Range	Mean	General Information
5121 Blood	Ingestion	a) Not given b) Not given c) Not given	a) 0.087 ppm b) 0.175 ppm c) 0.189+/-0.051 ppm	a) Ewes fed cull onions, alfafa with trace minerals and salts b) Ewes fed alfafa, corn, salts with Se (20 ppm) c) 5 lambs from ewes in b), nutritional myodegeneration a) , b) estimated from graph. Adequate levels present (0.08-0.20 ppm normal range). Idaho Unable to walk, muscle atrophy, pain, rigidity. Vitamin E deficiency. Affected sheep in a) had skeletal muscles mottled and pale, reticulated pattern in liver, kidney tissue congested. Nutritional myodegeneration a)-c). Fluorometry

SHEEP; SELENIUM; DIETS; IDAHO; TERRESTRIAL; DELIBERATE EXPOSURE; AUTOPSIES; ADULTS; JUVENILES'

Maas, J.; Bulgin, M.S.; Anderson, B.C.; Frye, T.M. 1984 Journal of the American Veterinary Medical Association 184(2): 201-204

Selenium
7782-49-2
Se
AtW 78.96, MP 170-217 C, BP 685 C, VP 1 mm Hg at 356 C, 10 mm Hg at 429 C

Sunfish, green
LEPOMIS CYANELLUS

Tissue	Cases Exposure Route	Range	Mean	General Information
5122 Liver	a) 20 b) 15 c) 4	a) Not given b) Not given c) Not given	a) 21.4+/-1.3 ppm b) 7.0+/-0.7 ppm c) 1.3+/-0.2 ppm	a) Site 2, on main body of reservoir receiving fly ash sluice of coal-fired power plant, East Belews Creek b) Site 1, separated from main body of reservoir with reduced exchange of water, East Belews Creek c) Reference site, uncontaminated pond in eastern Harrison Co, TX North Carolina, Belews Lake Fish population decline Edema. Blood, liver, gill, kidney and other abnormalities NA
5123 Muscle	a) 4 b) 4 c) 4	a) Not given b) Not given c) Not given	a) 12.9+/-2.2 ppm b) 2.3+/-0.4 ppm c) 1.3+/-0.2 ppm	a) Site 2, on main body of reservoir receiving fly ash sluice of coal-fired power plant, East Belews Creek b) Site 1, separated from main body of reservoir with reduced exchange of water, East Belews Creek c) Reference site, uncontaminated pond in eastern Harrison Co, TX North Carolina, Belews Lake NA

SELENIUM; LIVER; MUSCULOSKELETAL SYSTEM; BIOCONCENTRATION; BIOMAGNIFICATION; AQUATIC; ENVIRONMENTAL EXPOSURE; NORTH CAROLINA; ANIMAL POPULATIONS; COAL; FOSSIL-FUELED POWER PLANTS; FISHES; FLY ASH; WATER POLLUTION
Sorensen, E.M.B.; Cumbie, P.M.; Bauer, T.L.; Bell, J.S.; Harlan, C.W. 1984 Archives of Environmental Contamination and Toxicology 13:153-162

Sunfish, redear
LEPOMIS MICROLOPHUS

Tissue	Cases Exposure Route	Range	Mean	General Information
5124 Hepatopancreas	a) 4 b) 4 c) 4 d) 4 e) 3 Ingestion	a) Not given b) Not given c) Not given d) Not given e) Not given	a) 22+/-2 ppm b) 10+/-2 ppm c) 27+/-6 ppm d) 8+/-2 ppm e) 2+/-1 ppm	a) Site 1 b) Site 2 c) Site 3 d) Site 4 e) Site 6 Collected from 4 contaminated locations in Martin Lake. Site 6 was reference lake 8 km upstream in same watershed. Elevated levels did not correlate with pancreatic/hepatic cell ratios, although this ratio was higher in Martin Lake fish compared to controls. Texas NA

HEPATOPANCREAS; FISHES; AQUATIC; TEXAS; ENVIRONMENTAL EXPOSURE; METAL POISONING; SELENIUM; BIOACCUMULATION; INDUSTRIAL POLLUTION; WATER POLLUTION
Sorensen, E.M.B.; Bauer, T.L. 1984 Environmental Toxicology and Chemistry 3:159-165

Selenium
7782-49-2
Se
AtW 78.96, MP 170-217 C, BP 685 C, VP 1 mm Hg at 356 C, 10 mm Hg at 429 C
Sunfish, redear
LEPOMIS MICROLOPHUS

Tissue	Cases Exposure Route	Range	Mean	General Information
5125 Kidney	a) 4 b) 4 c) 4 d) 4 e) 3 Ingestion Inhalation	a) Not given b) Not given c) Not given d) Not given e) Not given	a) 38.7+/-20.5 mg/l b) 13.3+/-8.1 mg/l c) 115.7+/-45.4 mg/l d) 11.4+/-4.0 mg/l e) 0.1+/-0.1 mg/l S.E.	a) Martin Lake inflow, north of waste ponds b) Waste discharge area site 2 c) Waste discharge area site 3 d) Small cove midlake e) Reference lake control, 8 km upstream. Discharge from ash water holding ponds. Not siginificantly different. Texas, Martin Lake watershed NA
5126 Liver	a) 4 b) 4 c) 4 d) 4 e) 3 Ingestion Inhalation	a) Not given b) Not given c) Not given d) Not given e) Not given	a) 22.3+/-2.0 mg/l b) 10.0+/-2.1 mg/l c) 27.2+/-6.1 mg/l d) 8.4+/-1.7 mg/l e) 1.8+/-1.2 mg/l S.E.	a) Martin Lake inflow, north of waste ponds b) Waste discharge area site 2 c) Waste discharge area site 3 d) Small cove midlake e) Reference lake, control, 8 km upstream. Discharge from ash water holding ponds. Hepatopancreas (composite sample). a)-d) significantly higher levels than e). r=0.782, p</=0.01 for Se accumulation versus heptopancreas wt:body wt for a)-e). Texas, Martin Lake watershed Small livers, low wt per unit body length with highest levels NA
5127 Ovary	a) 1 b) 2 c) 1 d) 2 e) 1 Ingestion Inhalation	a) Not given b) Not given c) Not given d) Not given e) Not given	a) 0 mg/l b) 5.5+/-0.4 n.g/l c) 5.9 mg/l d) 5.0+/-0.4 mg/l e) 0 mg/l S.E.	a) Martin Lake inflow, north of waste ponds b) Waste discharge area site 2 c) Waste discharge area site 3 d) Small cove midlake e) Reference lake control, 8 km upstream. Discharge from ash water holding ponds. Not siginificantly different. Texas, Martin Lake watershed NA
5128 Pancreas	a) 4 b) 4 c) 4 d) 4 e) 3 Ingestion Inhalation	a) Not given b) Not given c) Not given d) Not given e) Not given	a) 22.3+/-2.0 mg/l b) 10.0+/-2.1 mg/l c) 27.2+/-6.1 mg/l d) 8.4+/-1.7 mg/l e) 1.8+/-1.2 mg/l S.E.	a) Martin Lake inflow, north of waste ponds b) Waste discharge area site 2 c) Waste discharge area site 3 d) Small cove midlake e) Reference lake, control, 8 km upstream. Discharge from ash water holding ponds. Hepatopancreas (composite sample). a)-d) significantly higher levels than e). r=0.782, p</=0.01 for Se accumulation versus heptopancreas wt:body wt for a)-e). Texas, Martin Lake watershed Small livers, low wt per unit body length with highest levels NA

(next page)

Selenium
7782-49-2
Se
AtW 78.96, MP 170-217 C, BP 685 C, VP 1 mm Hg at 356 C, 10 mm Hg at 429 C

Sunfish, redear
LEPOMIS MICROLOPHUS

(continued)

Tissue	Cases Exposure Route	Range	Mean	General Information
5129 Testis	a) 3 b) 2 c) 3 d) 2 e) 2 Ingestion Inhalation	a) Not given b) Not given c) Not given d) Not given e) Not given	a) 54.2+/-28.1 mg/l b) 21.3+/-14.7 mg/l c) 42.6+/-42.6 mg/l d) 0 mg/l e) 0 mg/l	a) Martin Lake inflow, north of waste ponds b) Waste discharge area site 2 c) Waste discharge area site 3 d) Small cove midlake e) Reference lake control, 8 km upstream. Discharge from ash water holding ponds. Not siginificantly different. Texas, Martin Lake watershed NA

BIOACCUMULATION; FISHES; SELENIUM; LIVER; OVARIES; TESTES; KIDNEYS; PANCREAS; TEXAS; WATER POLLUTION; INDUSTRIAL POLLUTION; AQUATIC; ENVIRONMENTAL EXPOSURE; BIOLOGICAL MONITORING

Sorensen, E.M.B.; Bauer, T.L. 1984 Environmental Pollution (Series A) 34:357-366

Swine
SUS sp.

Tissue	Cases Exposure Route	Range	Mean	General Information
5130 Blood	a) 2 b) 8 c) 2 d) 8 e) 2 f) 8 Ingestion	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given	a) 0.20 ppm b) 1.78 ppm c) 0.19 ppm d) 1.82 ppm e) 0.18 ppm f) 1.81 ppm	a) Controls, black hair b) Treatment, black hair c) Controls, red hair d) Treatment, red hair e) Controls, white hair f) Treatment, white hair Fed diets supplemented with 8 ppm/d for 35 d. South Dakota Posterior paralysis, separation of the hooves at coronary band. Red-haired pigs gained less wt, had toxicological symptoms Fluorimetry

BLOOD; HAIR; DELIBERATE EXPOSURE; SOUTH DAKOTA; SWINE; JUVENILES; NUTRITIONAL DISORDERS; SELENIUM; BIOACCUMULATION; HEALTH HAZARDS; TERRESTRIAL

Wahlstrom, R.C.; Goehring, T.B.; Johnson, D.D.; Libal, G.W.; Olson, O.E.; Palmer, I.S.; Thaler, R.C. 1984 Nutritional Reports International 29(1):143-147

Selenium
7782-49-2
Se
AtW 78.96, MP 170-217 C, BP 685 C, VP 1 mm Hg at 356 C, 10 mm Hg at 429 C

Swine
SUS sp.

Tissue	Cases Exposure Route	Range	Mean	General Information
5131 Blood, serum	a) 16 b) 14 c) 14 d) 14 e) 14 Ingestion	a) 0.018-0.005 ppm b) 0.019-0.025 ppm c) 0.020-0.055 ppm d) ^.022-0.068 ppm e) 0.016-0.088 ppm	a) Not applicable b) Not applicable c) Not applicable d) Not applicable e) Not applicable	a) Controls b) 0.025 ppm c) 0.050 ppm d) 0.075 ppm e) 0.10 ppm 0-4 wk after diet supplemented with Se. 5 controls (0 ppm) died during study and 1 died in lowest dietary supplement (0.025 ppm). Direct correlation of Se dose and serum glutathione peroxidase activity. Iowa Liver and heart lesions, death. Fluorimetry
BLOOD SERUM; SWINE; TERRESTRIAL; JUVENILES; DELIBERATE EXPOSURE; IOWA; SELENIUM; ANIMAL FEEDS; BIOACCUMULATION; DIETS; FOOD ADDITIVES				
Adkins, R.S.; Ewan, R.C. 1984 Journal of Animal Science 58(2):346-350				

Tissue	Cases Exposure Route	Range	Mean	General Information
5132 Hair	a) 2 b) 8 c) 2 d) 8 e) 2 f) 8 Ingestion	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given	a) 0.98 ppm b) 12.2 ppm c) 1.08 ppm d) 3.7 ppm e) 1.15 ppm f) 10.5 ppm	a) Controls, black hair b) Treatment, black hair c) Controls, red hair d) Treatment, red hair e) Controls, white hair f) Treatment, white hair Fed diets supplemented with 8 ppm/d for 35 d. South Dakota Posterior paralysis, separation of the hooves at coronary band. Red-haired pigs gained less wt, had toxicological symptoms Fluorimetry
BLOOD; HAIR; DELIBERATE EXPOSURE; SOUTH DAKOTA; SWINE; JUVENILES; NUTRITIONAL DISORDERS; SELENIUM; BIOACCUMULATION; HEALTH HAZARDS; TERRESTRIAL				
Wahlstrom, R.C.; Goehring, T.B.; Johnson, D.D.; Libal, G.W.; Olson, O.E.; Palmer, I.S.; Thaler, R.C. 1984 Nutritional Reports International 29(1):143-147				

Selenium
7782-49-2
Se
AtW 78.96, MP 170-217 C, BP 685 C, VP 1 mm Hg at 356 C, 10 mm Hg at 429 C

Trout, rainbow
SALMO GAIRDNERI

Tissue	Cases Exposure Route	Range	Mean	General Information
5133 Kidney	20 Ingestion	a) Not given b) Not given c) Not given d) Not given	a) 0.7+/-0.1 ug/g b) 3.0+/-0.3 ug/g c) 10.7+/-2.5 ug/g d) 11.2+/-2.9 ug/g Wet wt	a) Controls 0.6 ug/g in diet b) 6.6 ug/g diet (some added as Na-selenite) c) 11.4 ug/g diet (some added as Na-selenite) d) Overt lesions of nephrocalcinosis Diets consumed for 24 wk Initial body wt 0.6+/-0.1 g. Juveniles. Canada, Ontario Highest level of Se increased mortality and reduced body weight. Nephrocalcinosis, chalky deposits and swelling of kidneys. Trout with nephrocalcinosis had significantly higher Ca + Mg levels in kidneys than others on same diet. Fluorometry
5134 Liver	20 Ingestion	a) Not given b) Not given c) Not given d) Not given	a) 0.8+/-0.2 ug/g b) 38.8+/-3.0 ug/g c) 40.2+/-3.9 ug/g d) 51.3+/-4.1 ug/g Wet wt	a) Controls 0.6 ug/g in diet b) 6.6 ug/g diet (some added as Na-selenite) c) 11.4 ug/g diet (some added as Na-selenite) d) Overt lesions of nephrocalcinosis Diets consumed for 24 wk Initial body wt 0.6+/-0.1 g. Juveniles. Canada, Ontario Highest level of Se increased mortality and reduced body weight. Fluorometry

LIVER; KIDNEYS; FISHES; SELENIUM; CALCIUM; DIETS; MAGNESIUM; CANADA; BLOOD PLASMA; AQUATIC; DELIBERATE EXPOSURE

Hicks, B.D.; Hilton, J.W.; Ferguson, H.W. 1984 Journal of Fish Diseases 7:379-389

Selenium, isotope of mass 75
14265-71-5
Se
Sheep
OVIS sp.

Tissue	Cases Exposure Route	Range	Mean	General Information
5135 Blood, plasma	6 Injection	a) 107-64 cpm/mlX10(E+3) b) 64-16 cpm/mlX10(E+3) c) 700-1850 cpm/ml d) 142-41 cpm/mlX10(E+3) e) 284-1567 cpm/ml	a) Not applicable b) Not applicable c) Not applicable d) Not applicable e) Not applicable	a) 15-360 min, peak (107X10(E+3) cpm/ml) immediately after 300 uCi IV, 3 ewes b) 0.25-7 d, peak (64X10(E+3) cpm/ml) 6 hr after 300 uCi IV, 3 ewes c) 0.25-7 d, peak (1850 cpm/ml) 7 d after 300 uCi IV into ewe, 3 fetus d) 5-360 min, peak (142X10(E+3) cpm/ml) immediately after 70 uCi IV, 3 fetus e) 5-360 min, peak (1567 cpm/ml) at 360 min after 70 uCi IV into fetus, 3 ewes Estimated from graph. Placental transfer bidirectional, 3% from ewe to fetus, 1% from fetus to ewe. Canada Gamma counting

BLOOD PLASMA; FETUS; ADULTS; DELIBERATE EXPOSURE; SHEEP; CANADA; NUTRITIONAL DEFICIENCIES; SELENIUM; RADIONUCLIDES; BIOACCUMULATION; TRANSPLACENTAL TRANSFER; PREGNANCY; TERRESTRIAL; DRUGS
Shariff, M.A.; Krishnamurti, C.R.; Schaefer, A.L.; Heindze, A.M.; 1984 Canadian Journal of Animal Science 64:252-254

Silver
7440-22-4
Ag
AtW 107.868, MP 960.5 C, BP 2000 C, VP 1 mm Hg at 1310 C, 10 mm Hg at 1540 C
Flounder, windowpane
SCOPHTHALMUS AQUOSUS

Tissue	Cases Exposure Route	Range	Mean	General Information
5136 Liver	a) 6 b) 16 c) 6 d) 10 e) 9 f) 12 g) 6 h) 10 i) 9 j) 14 k) 4 l) 10 m) 10	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given g) Not given h) Not given i) Not given j) Not given k) Not given l) Not given m) Not given	a) 0.06 ppm b) 0.07 ppm c) 0.16 ppm d) 0.03 ppm e) 0.13 ppm f) 0.14 ppm g) 0.06 ppm h) 0.07 ppm i) 0.06 ppm j) 0.09 ppm k) 0.05 ppm l) 0.02 ppm m) 0.05 ppm Wet wt	a) 6/78 b) 7/79 c) 5/80 d) 7/80 e) 10/80 f) 7/79 g) 5/80 h) 7/80 i) 10/80 j) 7/79 k) 5/80 l) 7/80 m) 10/80 Milford, CT a)-e), Hempstead Harbor, NY f)-i), Roanoke Point, NY j)-m). Length 18-35 cm. Long Island Sound AAS

LIVER; COPPER; CADMIUM; CONNECTICUT; NEW YORK; POLYCHLORINATED BIPHENYLS; BIOACCUMULATION; FISHES; WATER POLLUTION; AQUATIC; ENVIRONMENTAL EXPOSURE
Greig, R.A.; Schurman, S.; Pereira, J.; Naples, P. 1983 Bulletin of Environmental Contamination and Toxicology 31:257-262

Sodium
7440-23-5
Na
AtW 22.98977, MP 97.82 C, BP 881.4 C, VP 1 mm Hg at 440 C, 10 mm Hg at 546 C

Beaver
CASTOR CANADENSIS

Tissue	Cases Exposure Route	Range	Mean	General Information
5137 Intestine	4 Ingestion	Not given	2465+/-363 ug/g	Undisturbed watershed. Specimens from fur trapper. Canada, Ontario, Georgian Bay, Tadenac Lake ES
5138 Kidney	4 Ingestion	Not given	1555+/-59 ug/g	Undisturbed watershed. Specimens from fur trapper. Canada, Ontario, Georgian Bay, Tadenac Lake ES
5139 Liver	4 Ingestion	Not given	1258+/-53 ug/g	Undisturbed watershed. Specimens from fur trapper. Canada, Ontario, Georgian Bay, Tadenac Lake ES

BEAVERS; OTTERS; RACCOONS; CANADA; BIOACCUMULATION; BIOMAGNIFICATION; SELENIUM; IRON; COPPER; CADMIUM; CALCIUM; ALUMINUM; MAGNESIUM; MANGANESE; SODIUM; NICKEL; PHOSPHORUS; ZINC; POTASSIUM; DETOXIFICATION; DIETS; LIVER; KIDNEYS; INTESTINES; MUSCLES; AQUATIC; TERRESTRIAL; ENVIRONMENTAL EXPOSURE; BIOLOGICAL MONITORING

Wren, C.D. 1984 Science of the Total Environment 34:177-184

Cattle
BOS sp.

Tissue	Cases Exposure Route	Range	Mean	General Information
5140 Hair	Ingestion	Not given	430 ppm	Data from one representative site. Deposition of elements on pasture. Collected Oct-Nov 1981-2. 5 yr old cows, 10 samples/farm, 9-14 farms, 7-12 sites. Deposition poorly correlated with essential elements, hair levels nearly constant. Belgium NA

CATTLE; HAIR; BIOLOGICAL MONITORING; AIR POLLUTION; LAND POLLUTION; ARSENIC; BARIUM; BROMINE; CERIUM; COBALT; CHROMIUM; CESIUM; IRON; POTASSIUM; LANTHANUM; SODIUM; RUBIDIUM; ANTIMONY; SCANDIUM; SELENIUM; SAMARIUM; THORIUM; ZINC; FOOD CONTAMINATION; BIOACCUMULATION; BIOCONCENTRATION; TERRESTRIAL; ENVIRONMENTAL EXPOSURE; TRACE ELEMENTS

Ronneau, C.; Cara, J. 1984 Science of the Total Environment 39:135-142

Sodium
7440-23-5
Na
AtW 22.98977, MP 97.82 C, BP 881.4 C, VP 1 mm Hg at 440 C, 10 mm Hg at 546 C

Cod, Pacific
GADUS MACROCEPHALUS

Tissue	Cases Exposure Route	Range	Mean	General Information
5141 Muscle	Ingestion	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given	a) 746+/-143 ug/g b) 891+/-124 ug/g c) 898+/-127 ug/g d) 79.3+/-13.7 mg/100 g e) 822+/-131 ug/g f) 866+/-141 ug/g Wet wt	a) Near Cape Flattery, WA, 50 fish. mean wt 2623+/-1174 g b) Cape Sarichef, AK, 12 fish, 1148+/-649 g c) Cape Ommaney, AK, 11 fish, 798+/-497 g d) Overall mean, combined sites e) Nape section of fish, 30 fillets f) Tail section of fish, 30 fillets. Pacific Ocean ES
FISHES; BIOLOGICAL MONITORING; PACIFIC OCEAN; ALUMINUM; BARIUM; CALCIUM; CHROMIUM; COPPER; IRON; MERCURY; POTASSIUM; LITHIUM; MAGNESIUM; MANGANESE; SODIUM; PHOSPHORUS; STRONTIUM; ZINC; AQUATIC; ENVIRONMENTAL EXPOSURE; WATER POLLUTION; FOOD CONTAMINATION; MUSCLES Teeny, F.M.; Gauglitz, E.J., Jr.; Hall, A.S.; Houle, C.R. 1984 Journal of Agricultural and Food Chemistry 32:852-855				

Mackerel, Atka
PLEUROGRAMMUS MONOPTERYGIUS

Tissue	Cases Exposure Route	Range	Mean	General Information
5142 Muscle	20 Ingestion	Not given	518+/-155 ug/g Wet wt	Off Kodiak Island, AK. Mean wt 461+/-156 g Pacific Ocean ES
FISHES; BIOLOGICAL MONITORING; PACIFIC OCEAN; ALUMINUM; BARIUM; CALCIUM; CHROMIUM; COPPER; IRON; MERCURY; POTASSIUM; LITHIUM; MAGNESIUM; MANGANESE; SODIUM; PHOSPHORUS; STRONTIUM; ZINC; AQUATIC; ENVIRONMENTAL EXPOSURE; WATER POLLUTION; FOOD CONTAMINATION; MUSCLES Teeny, F.M.; Gauglitz, E.J., Jr.; Hall, A.S.; Houle, C.R. 1984 Journal of Agricultural and Food Chemistry 32:852-855				

Otter
LUTRA CANADENSIS

Tissue	Cases Exposure Route	Range	Mean	General Information
5143 Intestine	4 Ingestion	Not given	1450+/-376 ug/g	Undisturbed watershed. Specimens from fur trapper. Canada, Ontario, Georgian Bay, Tadenac Lake ES
5144 Kidney	4 Ingestion	Not given	1252+/-225 ug/g	Undisturbed watershed. Specimens from fur trapper. Canada, Ontario, Georgian Bay, Tadenac Lake ES
5145 Liver	4 Ingestion	Not given	1480+/-134 ug/g	Undisturbed watershed. Specimens from fur trapper. Canada, Ontario, Georgian Bay, Tadenac Lake ES
BEAVERS; OTTERS; RACCOONS; CANADA; BIOACCUMULATION; BIOMAGNIFICATION; SELENIUM; IRON; COPPER; CADMIUM; CALCIUM; ALUMINUM; MAGNESIUM; MANGANESE; SODIUM; NICKEL; PHOSPHORUS; ZINC; POTASSIUM; DETOXIFICATION; DIETS; LIVER; KIDNEYS; INTESTINES; MUSCLES; AQUATIC; TERRESTRIAL; ENVIRONMENTAL EXPOSURE; BIOLOGICAL MONITORING Wren, C.D. 1984 Science of the Total Environment 34:177-184				

Sodium
7440-23-5
Na
AtW 22.98977, MP 97.82 C, BP 881.4 C, VP 1 mm Hg at 440 C, 10 mm Hg at 546 C

Pollock, walleye
THERAGRA CHALCOGRAMMA

Tissue	Cases Exposure Route	Range	Mean	General Information
5146 Muscle	Ingestion	a) Not given b) Not given c) Not given d) Not given	a) 1021+/-242 ug/g b) 603+/-211 ug/g c) 1032+/-92 ug/g d) 92.5+/-19.2 mg/100 g Wet wt	a) Caught in Bering Sea, AK, 20 fish, mean wt 965+/-352 g b) Shelik of Strait, AK, 10 fish, 1300+/-488 g c) Cape Ommaney, AK, 12 fish, 323+/-223 g. Site variation in levels, b) 6 X higher than a), c). Pacific Ocean ES

FISHES; BIOLOGICAL MONITORING; PACIFIC OCEAN; ALUMINUM; BARIUM; CALCIUM; CHROMIUM; COPPER; IRON; MERCURY; POTASSIUM; LITHIUM; MAGNESIUM; MANGANESE; SODIUM; PHOSPHORUS; STRONTIUM; ZINC; AQUATIC; ENVIRONMENTAL EXPOSURE; WATER POLLUTION; FOOD CONTAMINATION; MUSCLES

Teeny, F.M.; Gauglitz, E.J., Jr.; Hall, A.S.; Houle, C.R. 1984 Journal of Agricultural and Food Chemistry 32:852-855

Pomfret
BRAMA JAPONICA

Tissue	Cases Exposure Route	Range	Mean	General Information
5147 Muscle	24 Ingestion	Not given	624+/-101 ug/g Wet wt	Gulf of Alaska. Mean wt 1088+/-162 g Pacific Ocean ES

FISHES; BIOLOGICAL MONITORING; PACIFIC OCEAN; ALUMINUM; BARIUM; CALCIUM; CHROMIUM; COPPER; IRON; MERCURY; POTASSIUM; LITHIUM; MAGNESIUM; MANGANESE; SODIUM; PHOSPHORUS; STRONTIUM; ZINC; AQUATIC; ENVIRONMENTAL EXPOSURE; WATER POLLUTION; FOOD CONTAMINATION; MUSCLES

Teeny, F.M.; Gauglitz, E.J., Jr.; Hall, A.S.; Houle, C.R. 1984 Journal of Agricultural and Food Chemistry 32:852-855

Raccoon
PROCYON LOTOR

Tissue	Cases Exposure Route	Range	Mean	General Information
5148 Kidney	4 Ingestion	Not given	1517+/-56 ug/g	Undisturbed watershed. Specimens from fur trapper. Canada, Ontario, Georgian Bay, Tadenac Lake ES
5149 Liver	4 Ingestion	Not given	1580+/-60 ug/g	Undisturbed watershed. Specimens from fur trapper. Canada, Ontario, Georgian Bay, Tadenac Lake ES

BEAVERS; OTTERS; RACCOONS; CANADA; BIOACCUMULATION; BIOMAGNIFICATION; SELENIUM; IRON; COPPER; CADMIUM; CALCIUM; ALUMINUM; MAGNESIUM; MANGANESE; SODIUM; NICKEL; PHOSPHORUS; ZINC; POTASSIUM; DETOXIFICATION; DIETS; LIVER; KIDNEYS; INTESTINES; MUSCLES; AQUATIC; TERRESTRIAL; ENVIRONMENTAL EXPOSURE; BIOLOGICAL MONITORING

Wren, C.D. 1984 Science of the Total Environment 34:177-184

Sodium
7440-23-5
Na
AtW 22.98977, MP 97.82 C, BP 881.4 C, VP 1 mm Hg at 440 C, 10 mm Hg at 546 C

Shad, American
ALOSA SAPIDISSIMA

Tissue	Cases Exposure Route	Range	Mean	General Information
5150 Muscle	13 Ingestion	Not given	692+/-229 ug/g Wet wt	Near Seaside, OR. Mean wt 1039+/-251 g Pacific Ocean ES

FISHES; BIOLOGICAL MONITORING; PACIFIC OCEAN; ALUMINUM; BARIUM; CALCIUM; CHROMIUM; COPPER; IRON; MERCURY; POTASSIUM; LITHIUM; MAGNESIUM; MANGANESE; SODIUM; PHOSPHORUS; STRONTIUM; ZINC; AQUATIC; ENVIRONMENTAL EXPOSURE; WATER POLLUTION; FOOD CONTAMINATION; MUSCLES
Teeny, F.M.; Gauglitz, E.J., Jr.; Hall, A.S.; Houle, C.R. 1984 Journal of Agricultural and Food Chemistry 32:852-855

Sheep
OVIS sp.

Tissue	Cases Exposure Route	Range	Mean	General Information
5151 Blood, serum	a) 16 b) 16 c) 16	a) Not given b) Not given c) Not given	a) 146.5 mmol/l b) 146.9 mmol/l c) 147.8 mmol/l +/-0.9 S.E.	Lambs whose dams had basal diet fortified with cottonseed meal for 2 yr b) Same as a), basal diet plus 7% undigested sewage solids c) Same as a), basal diet Did not differ from controls. New Mexico AAS

KIDNEYS; LIVER; BONES; SHEEP; TERRESTRIAL; ENVIRONMENTAL EXPOSURE; DELIBERATE EXPOSURE; NEW MEXICO; CADMIUM; CHROMIUM; COPPER; IRON; MERCURY; NICKEL; LEAD; ZINC; METALS; ANIMAL FEEDS; AGRICULTURE; BIOACCUMULATION; BIOLOGICAL MONITORING; FARMS; FOOD CONTAMINATION; LAND POLLUTION; SEWAGE; CALCIUM; BLOOD SERUM; MAGNESIUM; POTASSIUM; PHOSPHORUS; SODIUM
Hudgens, R.E.; Hallford, D.M. 1984]utrition Reports International 29(1):11-21

Sole, Dover
MICROSTOMUS PACIFICUS

Tissue	Cases Exposure Route	Range	Mean	General Information
5152 Muscle	Ingestion	a) Not given b) Not given c) Not given d) Not given	a) 656+/-211 ug/g b) 1457+/-112 ug/g c) 1201+/-334 ug/g d) 94.1+/-21.4 mg/100 g Wet wt	a) Caught near Newport, OR, 29 fish, mean wt 660+/-326 g b) Cape Ommaney, AK, 11 fish, 506+/-214 g c) Santa Cruz, CA, 10 fish, 212+/-68 g d) Overall mean, combined sites. Site variations in levels. Pacific Ocean ES

FISHES; BIOLOGICAL MONITORING; PACIFIC OCEAN; ALUMINUM; BARIUM; CALCIUM; CHROMIUM; COPPER; IRON; MERCURY; POTASSIUM; LITHIUM; MAGNESIUM; MANGANESE; SODIUM; PHOSPHORUS; STRONTIUM; ZINC; AQUATIC; ENVIRONMENTAL EXPOSURE; WATER POLLUTION; FOOD CONTAMINATION; MUSCLES
Teeny, F.M.; Gauglitz, E.J., Jr.; Hall, A.S.; Houle, C.R. 1984 Journal of Agricultural and Food Chemistry 32:852-855

Sodium
7440-23-5
Na
AtW 22.98977, MP 97.82 C, BP 881.4 C, VP 1 mm Hg at 440 C, 10 mm Hg at 546 C
Whiting, Pacific
MERLUCCIUS PRODUCTUS

Tissue	Cases Exposure Route	Range	Mean	General Information
5153 Muscle	a) 20 b) 32 Ingestion	a) Not given b) Not given	a) 436+/-206 ug/g b) 1214+/-520 ug/g Wet wt	a) Near Astoria, OR, mean wt 873+/-246 g b) Refrigerated 2 d in seawater, Astoria, OR, 937+/-227 g. 2 d storage in refrigerated seawater substantially increased levels by diffusion into muscle. Pacific Ocean ES
FISHES; BIOLOGICAL MONITORING; PACIFIC OCEAN; ALUMINUM; BARIUM; CALCIUM; CHROMIUM; COPPER; IRON; MERCURY; POTASSIUM; LITHIUM; MAGNESIUM; MANGANESE; SODIUM; PHOSPHORUS; STRONTIUM; ZINC; AQUATIC; ENVIRONMENTAL EXPOSURE; WATER POLLUTION; FOOD CONTAMINATION; MUSCLES Teeny, F.M.; Gauglitz, E.J., Jr.; Hall, A.S.; Houle, C.R. 1984 Journal of Agricultural and Food Chemistry 32:852-855				

Sodium, ion (Na(1+))
17341-25-2
Na
AtW 22.98977
Silkworm
BOMBYX MORI

Tissue	Cases Exposure Route	Range	Mean	General Information
5154 Alimentary canal	Ingestion	a) Not given b) Not given	a) 260+/-54 ug/g b) 171+/-3 ug/g Dry wt	a) Controls b) Treatment After diet containing no (controls), or 80 ug Cd/g wet wt, fed from hatching until 6th day of 5th instar. Japan AAS
5155 Fat body	Ingestion	a) Not given b) Not given	a) 165+/-72 ug/g b) 218+/-81 ug/g Dry wt	a) Controls b) Treatment After diet containing no (controls), or 80 ug Cd/g wet wt, fed from hatching until 6th day of 5th instar. Japan AAS
5156 Gonads	Ingestion	a) Not given b) Not given	a) 385 ug/g b) 57.0 ug/g Dry wt	a) Controls b) Treatment After diet containing no (controls), or 80 ug Cd/g wet wt, fed from hatching until 6th day of 5th instar. Japan AAS

(next page)

Sodium, Ion (Na(1+))
17341-25-2
Na
AtW 22.98977
Silkworm
BOMBYX MORI

(continued)

Tissue	Cases Exposure Route	Range	Mean	General Information
5157 Head	Ingestion	a) Not given b) Not given	a) 308+/-34 ug/g b) 690+/-60 ug/g Dry wt	a) Controls b) Treatment After diet containing no (controls), or 80 ug Cd/g wet wt, fed from hatching until 6th day of 5th instar. Japan AAS
5158 Integument	Ingestion	a) Not given b) Not given	a) 121+/-26 ug/g b) 155+/-15 ug/g Dry wt	a) Controls b) Treatment After diet containing no (controls), or 80 ug Cd/g wet wt, fed from hatching until 6th day of 5th instar. Japan AAS
5159 Malpighian tubes	Ingestion	a) Not given b) Not given	a) 202+/-75 ug/g b) 150+/-19 ug/g Dry wt	a) Controls b) Treatment After diet containing no (controls), or 80 ug Cd/g wet wt, fed from hatching until 6th day of 5th instar. Japan AAS
5160 Silk gland	Ingestion	a) Not given b) Not given	a) 176+/-28 ug/g b) 245+/-17 ug/g Dry wt	a) Controls b) Treatment After diet containing no (controls), or 80 ug Cd/g wet wt, fed from hatching until 6th day of 5th instar. Japan AAS
5161 Trachea	Ingestion	a) Not given b) Not given	a) 101+/-7 ug/g b) 146+/-26 ug/g Dry wt	a) Controls b) Treatment After diet containing no (controls), or 80 ug Cd/g wet wt, fed from hatching until 6th day of 5th instar. Japan AAS

SILK GLAND; HEAD; TRACHEA; MALPIGHIAN TUBES; GASTROINTESTINAL TRACT; GONADS; FAT BODY; INTEGUMENT; DELIBERATE EXPOSURE; SILKWORMS; TERRESTRIAL; JAPAN; METAL POISONING; METALS; CADMIUM; ZINC; COPPER; CALCIUM; IRON; MAGNESIUM; MANGANESE; ALUMINUM; SODIUM; POTASSIUM; BIOACCUMULATION

Suzuki, K.T.; Aoki, Y.; Nishikawa, M.; Masui, H.; Matsubara, F. 1984 Comparative Biochemistry and Physiology 79C(2):249-253

Somatotropin
9002-72-6
EXACT COMPOSITION UNKNOWN OR UNDETERMINED
Cattle

Tissue	Cases Exposure Route	Range	Mean	General Information
5162 Blood, serum	a) 10 b) 10 c) 10 d) 10 e) 10 f) 10 g) 10 Injection	a) 16.6-16.4 ng/ml b) 26.4-63.3 ng/ml c) 51.5-113.1 ng/ml d) Not given e) Not given f) 1.1-7.6 ng/ml g) Not given	a) Not applicable b) Not applicable c) Not applicable d) 52.3 ng/ml e) 71.4 ng/ml f) Not applicable g) 106.1 ng/ml	a) Controls b) Treated with 10, 25, 50 ug of hp GRF-44 NH(Sub 2) (human pancreatic growth hormone-releasing factors with 44 amino acids) c) Treated with 100 ug of hp GRF-44 NH2 d) Treated with 300 ug e) Treated with 1000 ug f) Treated 10-1000 ug after 4 hr g) Treated with 100 ug of hp GRF-40OH. Michigan
SERUM; STEERS; TERRESTRIAL; DELIBERATE EXPOSURE; MICHIGAN; HORMONES; AGRICULTURE				
Moseley, W.M.; Krabill, L.F.; Friedman, A.R.; Olsen, R.F. 1984 Journal of Animal Science 58(2):430-435				

Streptomycin, dihydro- (8 CI); D-Streptamine, O-2-deoxy-2-(methylamino)-alpha-L-glucopyranosyl-(1,2)-O-5-deoxy-3-C-(hydroxymet hyl)-alpha-L-lyxofuranosyl-(1-4)-N,N'-bis(aminoiminomethyl)- (9 CI)
128-46-1
C21-H41-N7-O12
MW 583.62
Cattle
BOS sp.

Tissue	Cases Exposure Route	Range	Mean	General Information
5163 Blood, plasma	8 Injection	a) Not given b) Not given	a) 81.3+/-13.6 ug/ml b) 0.25+/-0.25 ug/ml	a) Peak 1.5 hr after 25 mg/kg IM b) 24 hr after 25 mg/kg IM. Sweden Well-diffusion
5164 Milk	8 Injection	a) Not given b) Not given c) Not given d) Not given	a) 26+/-8.0 ug/ml b) 3.2+/-1.22 ug/ml c) 3.7+/-2.16 ug/ml d) 0.2+/-0.28 ug/ml	a) Mastitic, peak at 5 hr b) Normal, peak at 5 hr c) Mastitic, 24 hr d) Normal, 24 hr After 25 mg/kg IM. Milk from either normal or experimentally infected udder quarters of same cow. Sweden Well-diffusion
BLOOD PLASMA; MILK; DELIBERATE EXPOSURE; TERRESTRIAL; CATTLE; SWEDEN; INJECTION; ANTIBIOTICS; DRUGS; DRUG THERAPY; BIOACCUMULATION				
Franklin, A.; Holmberg, O.; Horn af Rantzien, M.; Astrom, G. 1984 American Journal of Veterinary Research 45(7):1398-1402				

Strobane
8001-50-1
EXACT COMPOSITION UNKNOWN OR UNDETERMINED
Clam, Asiatic
CORBICULA MANILENSIS

Tissue	Cases Exposure Route	Range	Mean	General Information
5165 Body, whole	6	<1-58 ug/kg Dry wt	<1 ug/kg Dry wt Median	Trend in concentration increase from inorganic to organic to living material. August 1979-May 1980, sampling dates. Non-point sources. No significant seasonal, temporal or spatial variablity reported. Florida, Apalachicola River GC-EC
BODY; ASIATIC CLAM; AQUATIC; ENVIRONMENTAL EXPOSURE; FLORIDA; TRACE ELEMENTS; PESTICIDES; POLYCHLORINATED BIPHENYLS; CHROMIUM; COPPER; LEAD; MANGANESE; MERCURY; ZINC; DDD; ORGANOPHOSPHATES; DDE; DDT; DIELDRIN; HEPTACHLOR EPOXIDE; INSECTICIDES; GEOLOGY Elder, J.P.; Mattraw, H.C. 1984 Archives of Environmental Contamination and Toxicology 13:453-469				

Strontium
7440-24-6
Sr
AtW 87.62, MP 357 C, BP 1366 C, VP 10 mm Hg at 898 C, 1 mm Hg at 740 C
Cod, Pacific
GADUS MACROCEPHALUS

Tissue	Cases Exposure Route	Range	Mean	General Information
5166 Muscle	Ingestion	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given	a) 0.480+/-0.257 ug/g b) 0.367+/-0.115 ug/g c) 0.525+/-0.184 ug/g d) 0.434+/-0.223 ug/g e) 0.427+/-0.166 ug/g f) 0.484+/-0.157 ug/g Wet wt	a) Near Cape Flattery, WA, 50 fish, mean wt 2623+/-1174 g b) Cape Sarichef, AK, 12 fish, 1148+/-640 g c) Cape Ommaney, AK, 11 fish, 798+/-497 g d) Overall mean, combined sites e) Nape section of fish, 30 fillets f) Tail section of fish, 30 fillets. Considered low level. Pacific Ocean ES
FISHES; BIOLOGICAL MONITORING; PACIFIC OCEAN; ALUMINUM; BARIUM; CALCIUM; CHROMIUM; COPPER; IRON; MERCURY; POTASSIUM; LITHIUM; MAGNESIUM; MANGANESE; SODIUM; PHOSPHORUS; STRONTIUM; ZINC; AQUATIC; ENVIRONMENTAL EXPOSURE; WATER POLLUTION; FOOD CONTAMINATION; MUSCLES Teeny, F.M.; Gauglitz, E.J., Jr.; Hall, A.S.; Houle, C.R. 1984 Journal of Agricultural and Food Chemistry 32:852-855				

Strontium
7440-24-6
Sr
AtW 87.62, MP 357 C, BP 1366 C, VP 10 mm Hg at 898 C, 1 mm Hg at 740 C

Deer, mule
ODOCOILEUS HEMIONUS

Tissue	Cases Exposure Route	Range	Mean	General Information
5167 Bone	a) 9 b) 3 c) 5	a) 1.00-65.00 pCi/g b) 20.00-39.00 pCi/g c) 0.52-3.00 pCi/g	a) 16.22 pCi/g b) Not given c) 1.11 pCi/g	a) Known residence history near Hanford site waste ponds b) From same area as a), with possible fallout from weapons test by Chinese in 1980 c) Known residence history isolated from Hanford waste ponds Significant positive correlation between percent of time in radiation zones associated with waste-management ponds and radionuclide content. a), b) significantly different. Washington, Hanford Ge detector
BONES; MUSCLES; LIVER; STOMACH; DEER; TERRESTRIAL; ENVIRONMENTAL EXPOSURE; WASHINGTON; CESIUM; STRONTIUM; FALLOUT; BIOLOGICAL MONITORING; LAND POLLUTION; AIR POLLUTION; WATER POLLUTION; RADIONUCLIDES Eberhardt, L.E.; Cadwell, L.L.; Hanson, E.E. 1984 Health Physics 47(5):753-759				

Mackerel, Atka
PLEUROGRAMMUS MONOPTERYGIUS

Tissue	Cases Exposure Route	Range	Mean	General Information
5168 Muscle	20 Ingestion	Not given	0.316+/-0.109 ug/g Wet wt	Off Kodiak Island, AK. Mean wt 461+/-156 g. Considered low level. Pacific Ocean ES
FISHES; BIOLOGICAL MONITORING; PACIFIC OCEAN; ALUMINUM; BARIUM; CALCIUM; CHROMIUM; COPPER; IRON; MERCURY; POTASSIUM; LITHIUM; MAGNESIUM; MANGANESE; SODIUM; PHOSPHORUS; STRONTIUM; ZINC; AQUATIC; ENVIRONMENTAL EXPOSURE; WATER POLLUTION; FOOD CONTAMINATION; MUSCLES Teeny, F.M.; Gauglitz, E.J., Jr.; Hall, A.S.; Houle, C.R. 1984 Journal of Agricultural and Food Chemistry 32:852-855				

Pollock, walleye
THERAGRA CHALCOGRAMMA

Tissue	Cases Exposure Route	Range	Mean	General Information
5169 Muscle	Ingestion	a) Not given b) Not given c) Not given d) Not given	a) 0.697+/-0.147 ug/g b) 0.367+/-0.148 ug/g c) 0.542+/-0.110 ug/g d) 0.574+/-0.137 ug/g Wet wt	a) Caught in Bering Sea, AK, 20 fish, mean wt 965+/-352 g b) Shelik of Strait, AK, 10 fish, 1300+/-488 g c) Cape Ommaney, AK, 12 fish, 323+/-228 g. Considered low levels. Pacific Ocean ES
FISHES; BIOLOGICAL MONITORING; PACIFIC OCEAN; ALUMINUM; BARIUM; CALCIUM; CHROMIUM; COPPER; IRON; MERCURY; POTASSIUM; LITHIUM; MAGNESIUM; MANGANESE; SODIUM; PHOSPHORUS; STRONTIUM; ZINC; AQUATIC; ENVIRONMENTAL EXPOSURE; WATER POLLUTION; FOOD CONTAMINATION; MUSCLES Teeny, F.M.; Gauglitz, E.J., Jr.; Hall, A.S.; Houle, C.R. 1984 Journal of Agricultural and Food Chemistry 32:852-855				

Strontium
7440-24-6
Sr
AtW 87.62, MP 857 C, BP 1366 C, VP 10 mm Hg at 898 C, 1 mm Hg at 740 C

Pomfret
BRAMA JAPONICA

Tissue	Cases Exposure Route	Range	Mean	General Information
5170 Muscle	24 Ingestion	Not given	0.264+/-0.082 ug/g Wet wt	Gulf of Alaska. Mean wt 1088+/-162 g. Considered low level. Pacific Ocean ES

FISHES; BIOLOGICAL MONITORING; PACIFIC OCEAN; ALUMINUM; BARIUM; CALCIUM; CHROMIUM; COPPER; IRON; MERCURY; POTASSIUM; LITHIUM; MAGNESIUM; MANGANESE; SODIUM; PHOSPHORUS; STRONTIUM; ZINC; AQUATIC; ENVIRONMENTAL EXPOSURE; WATER POLLUTION; FOOD CONTAMINATION; MUSCLES
Teeny, F.M.; Gauglitz, E.J., Jr.; Hall, A.S.; Houle, C.R. 1984 Journal of Agricultural and Food Chemistry 32:852-855

Shad, American
ALOSA SAPIDISSIMA

Tissue	Cases Exposure Route	Range	Mean	General Information
5171 Muscle	13 Ingestion	Not given	0.315+/-0.118 ug/g Wet wt	Near Seaside, OR. Mean wt 1039+/-251 g. Considered low level. Pacific Ocean ES

FISHES; BIOLOGICAL MONITORING; PACIFIC OCEAN; ALUMINUM; BARIUM; CALCIUM; CHROMIUM; COPPER; IRON; MERCURY; POTASSIUM; LITHIUM; MAGNESIUM; MANGANESE; SODIUM; PHOSPHORUS; STRONTIUM; ZINC; AQUATIC; ENVIRONMENTAL EXPOSURE; WATER POLLUTION; FOOD CONTAMINATION; MUSCLES
Teeny, F.M.; Gauglitz, E.J., Jr.; Hall, A.S.; Houle, C.R. 1984 Journal of Agricultural and Food Chemistry 32:852-855

Sole, Dover
MICROSTOMUS PACIFICUS

Tissue	Cases Exposure Route	Range	Mean	General Information
5172 Muscle	Ingestion	a) Not given b) Not given c) Not given d) Not given	a) 0.502+/-0.142 ug/g b) 0.640+/-0.076 ug/g c) 0.907+/-0.180 ug/g d) 0.613+/-0.135 ug/g Wet wt	a) Caught near Newport, OR, 20 fish, mean wt 660+/-326 g b) Cape Ommaney, AK, 11 fish, 506+/-214 g c) Santa Cruz, CA, 10 fish, 212+/-68 g d) Overall mean, combined sites. Considered low levels. Pacific Ocean ES

FISHES; BIOLOGICAL MONITORING; PACIFIC OCEAN; ALUMINUM; BARIUM; CALCIUM; CHROMIUM; COPPER; IRON; MERCURY; POTASSIUM; LITHIUM; MAGNESIUM; MANGANESE; SODIUM; PHOSPHORUS; STRONTIUM; ZINC; AQUATIC; ENVIRONMENTAL EXPOSURE; WATER POLLUTION; FOOD CONTAMINATION; MUSCLES
Teeny, F.M.; Gauglitz, E.J., Jr.; Hall, A.S.; Houle, C.R. 1984 Journal of Agricultural and Food Chemistry 32:852-855

Strontium
7440-24-6
Sr
AtW 87.62, MP 357 C, BP 1366 C, VP 10 mm Hg at 898 C, 1 mm Hg at 740 C
Whiting, Pacific
MERLUCCIUS PRODUCTUS

Tissue	Cases Exposure Route	Range	Mean	General Information
5173 Muscle	a) 20 b) 32 Ingestion	a) Not given b) Not given	a) 0.348+/-0.177 ug/g b) 0.418+/-0.117 ug/g Wet wt	a) Near Astoria, OR, mean wt 873+/-246 g b) Refrigerated 2 d in seawater, Astoria, OR, 987+/-227 g. Considered low level. Pacific Ocean ES
FISHES; BIOLOGICAL MONITORING; PACIFIC OCEAN; ALUMINUM; BARIUM; CALCIUM; CHROMIUM; COPPER; IRON; MERCURY; POTASSIUM; LITHIUM; MAGNESIUM; MANGANESE; SODIUM; PHOSPHORUS; STRONTIUM; ZINC; AQUATIC; ENVIRONMENTAL EXPOSURE; WATER POLLUTION; FOOD CONTAMINATION; MUSCLES				
Teeny, F.M.; Gauglitz, E.J., Jr.; Hall, A.S.; Houle, C.R. 1984 Journal of Agricultural and Food Chemistry 32:852-855				

Strontium, isotope of mass 90
10098-97-2
Sr
AtW 90, MP 757 C, BP 1366 C, VP 10 mm Hg at 898 C, 1 mm Hg at 740 C
Cattle
BOS sp.

Tissue	Cases Exposure Route	Range	Mean	General Information
5174 Milk		0.8-0.55 Bq/l	Not given	4 l from bulk tank after morning milking at midpoint of each month, 1981. Cattle at dairy 2 km from Sellafield Nuclear Fuel Reprocessing Plant. United Kingdom, Cumbria, Sellafield Beta counting
MILK; CATTLE; TERRESTRIAL; ENVIRONMENTAL EXPOSURE; UNITED KINGDOM; RADIONUCLIDES; CESIUM; STRONTIUM; LACTATION				
Sumerling, T.J.; Dodd, N.J.; Green, N. 1984 Science of the Total Environment 34:57-72				

Tissue	Cases Exposure Route	Range	Mean	General Information
5175 Milk		a) 0.41-1.18 Bq/l b) 0.20-0.37 Bq/l c) 0.22-0.45 Bq/l d) 0.19-1.98 Bq/l	a) Not given b) Not given c) Not given d) Not given	a) </=1.5 km from center of Sellafield Works, nuclear fuel reprocessing plant b) Approx 300 m from River Irt (tidal flooding in exceptional conditions) c) Approx 400 m from River Esk (not subject to tidal flooding) d) <200 m from River Esk (regular tidal flooding) Collected 1979-82, late summer. b)-d) 2-3.5 km from Ravenglass Estuary. United Kingdom, West Cumbria
MILK; TERRESTRIAL; CATTLE; LACTATION; RADIONUCLIDES; WATER POLLUTION; STRONTIUM; CESIUM; PLUTONIUM; RABBITS				
Curtis, E.J.C.; Bradford, W.R ; Popplewell, D.S. 1984 Science of the Total Environment 35:267-288				

Sulfone, p-chlorophenyl methyl (8 CI); Bensene, 1-chloro-4-(methylsulfonyl)- (9 CI)
98-57-7
C7-H7-Cl-O2-S
Sheep
OVIS sp.

Tissue	Cases Exposure Route	Range	Mean	General Information
5176 Adipose	2 Ingestion	a) Not applicable b) Not applicable c) Not applicable d) Not applicable	a) 1.5%/gX10(E+7) b) 88.9%/gX10(E+7) c) 1.8%/gX10(E+7) d) 75.4%/gX10(E+7)	a) 0.022 mg/kg, omental, 1 case b) 22 mg/kg, omental, 1 case c) 0.022 mg/kg, renal, 1 case d) 22 mg/kg, renal, 1 case % label as radiocarbon residue 14 d after indicated dose. Two tissue locations examined. Texas Scintillation counting
5177 Blood, whole	a) 1 b) 1 Ingestion	a) 40-2%/gX10(E+7) b) 80-30%/gX10(E=7)	a) Not applicable b) Not applicable	a) 0.02-14 d, peak [50%/gX10(E+7)] b) 0.08-14 d, peak [100%/gX10(E+7)] 0.16 d after 22.0 mg/kg. Pretreatment with unlabeled parent for 5 d. Estimated from graph. Texas Scintillation counting
5178 Brain	a) 1 b) 1 Ingestion	a) Not applicable b) Not applicable	a) 4.6%/gX10(E+7) b) 31.0%/gX10(E+7)	a) 0.022 mg/kg b) 22.0 mg/kg % label as radiocarbon residue 14 d after indicated dose. Texas Scintillation counting
5179 Heart	a) 1 b) 1 Ingestion	a) Not applicable b) Not applicable	a) 2.2%/gX10(E+7) b) 46.1%/gX10(E+7)	a) 0.022 mg/kg b) 22.0 mg/kg % label as radiocarbon residue 14 d after indicated dose. Texas Scintillation counting
5180 Kidney	a) 1 b) 1 Ingestion	a) Not applicable b) Not applicable	a) 6.4%/gX10(E+7) b) 55.0%/gX10(E+7)	a) 0.022 mg/kg b) 22.0 mg/kg % label as radiocarbon residue 14 d after indicated dose. Texas Scintillation counting
5181 Liver	a) 1 b) 1 Ingestion	a) Not applicable b) Not applicable	a) 6.4%/gX10(E+7) b) 103.3%/gX10(E+7)	a) 0.022 mg/kg b) 22.0 mg/kg % label as radiocarbon residue 14 d after indicated dose. Texas Scintillation counting
5182 Muscle	2 Ingestion	a) Not applicable b) Not applicable c) Not applicable d) Not applicable	a) 2.4%/gX10(E+7) b) 33.2%/gX10(E+7) c) 2.4%/gX10(E+7) d) 31.1%/gX10(E+7)	a) 0.022 mg/kg, LONGISSIMUS DORSI, 1 case b) 22 mg/kg, LONGISSIMUS DORSI, 1 case c) 0.022 mg/kg, triceps, 1 case d) 22 mg/kg, triceps, 1 case % label as radiocarbon residue 14 d after indicated dose. Two tissue locations examined. Texas Scintillation counting

(next page)

Sulfone, p-chlorophenyl methyl (8 CI); Benzene, 1-chloro-4-(methylsulfonyl)- (9 CI)
98-57-7
C7-H7-Cl-O2-S
Sheep
OVIS sp.

(continued)

Tissue	Cases Exposure Route	Range	Mean	General Information
5183 Spleen	a) 1 b) 1 Ingestion	a) Not applicable b) Not applicable	a) 1.8%/gX10(E+7) b) 36.4%/gX10(E+7)	a) 0.022 mg/kg b) 22.0 mg/kg % label as radiocarbon residue 14 d after indicated dose. Texas Scintillation counting
5184 Tongue	a) 1 b) 1 Ingestion	a) Not applicable b) Not applicable	a) 4.3%/gX10(E+7) b) 52.3%/gX10(E+7)	a) 0.022 mg/kg b) 22.0 mg/kg % label as radiocarbon residue 14 d after indicated dose. Texas Scintillation counting
5185 Urine	a) 1 b) 1 Ingestion	a) Not applicable b) Not applicable	a) 90% b) 35%	a) 0.022 mg/kg b) 22.0 mg/kg % recovery in 14 d after indicated dose. 10% of low dose and 20% of high dose in feces by 14 d. Texas Scintillation counting

BLOOD; URINE; MILK; BRAIN; ADIPOSE TISSUE; HEART; KIDNEYS; LIVER; MUSCLES; OVARIES; SPLEEN; TONGUE; TEXAS; DELIBERATE EXPOSURE; CATTLE; SHEEP; ADULTS; HERBICIDES; PESTICIDES; ACCIDENTAL POISONING; ANIMAL POPULATIONS; BIOACCUMULATION; HEALTH HAZARDS; DRINKING WATER; METABOLITES; RADIONUCLIDES; WATER POLLUTION; TERRESTRIAL

Oehler, D.D.; Ivie, G.W. 1983 Archives of Environmental Contamination and Toxicology 12:227-233

Terphenyl, chlorinated
61788-33-8
EXACT COMPOSITION UNKNOWN OR UNDETERMINED
Eagle, white-tailed
HALIAEETUS ALBICILLA

Tissue	Cases Exposure Route	Range	Mean	General Information
5186 Body				Review. Occurrence of PCTs in aquatic organisms, wild and domestic birds and mammals. Seldom detected in birds. Levels higher in domestic than in wild mammals, perhaps in commercial animal food. Much lower pollution in Japan by PCTs than by PCBs.

REVIEW; ADIPOSE TISSUE; BODY; LIVER; MUSCLES; EGGS; AQUATIC; TERRESTRIAL; MAMMALS; BIRDS; ENVIRONMENTAL EXPOSURE; BALTIC SEA; CANADA; UNITED KINGDOM; ITALY; POLAND; CHLORINE ORGANIC COMPOUNDS; CHLORINATED HYDROCARBONS; POLYCHLORINATED TERPHENYLS; ANIMAL FEEDS; BIOACCUMULATION; INDUSTRIAL POLLUTION; SEWAGE; WATER POLLUTION

Jensen, A.A.; Jorgensen, K.F. 1983 Science of the Total Environment 27:231-250

Terphenyl, chlorinated
61788-33-8
EXACT COMPOSITION UNKNOWN OR UNDETERMINED
Gull, black-headed
LARUS RIDIBUNDUS

Tissue	Cases Exposure Route	Range	Mean	General Information
5187 Adipose				Review. Occurrence of PCTs in aquatic organisms, wild and domestic birds and mammals. Seldom detected in birds. Levels higher in domestic than in wild mammals, perhaps in commercial animal food. Much lower pollution in Japan by PCTs than by PCBs.
5188 Liver				Review. Occurrence of PCTs in aquatic organisms, wild and domestic birds and mammals. Seldom detected in birds. Levels higher in domestic than in wild mammals, perhaps in commercial animal food. Much lower pollution in Japan by PCTs than by PCBs.
5189 Muscle				Review. Occurrence of PCTs in aquatic organisms, wild and domestic birds and mammals. Seldom detected in birds. Levels higher in domestic than in wild mammals, perhaps in commercial animal food. Much lower pollution in Japan by PCTs than by PCBs.

REVIEW; ADIPOSE TISSUE; BODY; LIVER; MUSCLES; EGGS; AQUATIC; TERRESTRIAL; MAMMALS; BIRDS; ENVIRONMENTAL EXPOSURE; BALTIC SEA; CANADA; UNITED KINGDOM; ITALY; POLAND; CHLORINE ORGANIC COMPOUNDS; CHLORINATED HYDROCARBONS; POLYCHLORINATED TERPHENYLS; ANIMAL FEEDS; BIOACCUMULATION; INDUSTRIAL POLLUTION; SEWAGE; WATER POLLUTION
Jensen, A.A.; Jorgensen, K.F. 1983 Science of the Total Environment 27:231-250

Gull, herring
LARUS ARGENTATUS

Tissue	Cases Exposure Route	Range	Mean	General Information
5190 Adipose				Review. Occurrence of PCTs in aquatic organisms, wild and domestic birds and mammals. Seldom detected in birds. Levels higher in domestic than in wild mammals, perhaps in commercial animal food. Much lower pollution in Japan by PCTs than by PCBs.
5191 Eggs				Review. Occurrence of PCTs in aquatic organisms, wild and domestic birds and mammals. Seldom detected in birds. Levels higher in domestic than in wild mammals, perhaps in commercial animal food. Much lower pollution in Japan by PCTs than by PCBs.

REVIEW; ADIPOSE TISSUE; BODY; LIVER; MUSCLES; EGGS; AQUATIC; TERRESTRIAL; MAMMALS; BIRDS; ENVIRONMENTAL EXPOSURE; BALTIC SEA; CANADA; UNITED KINGDOM; ITALY; POLAND; CHLORINE ORGANIC COMPOUNDS; CHLORINATED HYDROCARBONS; POLYCHLORINATED TERPHENYLS; ANIMAL FEEDS; BIOACCUMULATION; INDUSTRIAL POLLUTION; SEWAGE; WATER POLLUTION
Jensen, A.A.; Jorgensen, K.F. 1983 Science of the Total Environment 27:231-250

Terphenyl, chlorinated
61788-33-8
EXACT COMPOSITION UNKNOWN OR UNDETERMINED

Hawk, sparrow
ACCIPITER NISUS

Tissue	Cases Exposure Route	Range	Mean	General Information
5192 Liver				Review. Occurrence of PCTs in aquatic organisms, wild and domestic birds and mammals. Seldom detected in birds. Levels higher in domestic than in wild mammals, perhaps in commercial animal food. Much lower pollution in Japan by PCTs than by PCBs.

REVIEW; ADIPOSE TISSUE; BODY; LIVER; MUSCLES; EGGS; AQUATIC; TERRESTRIAL; MAMMALS; BIRDS; ENVIRONMENTAL EXPOSURE; BALTIC SEA; CANADA; UNITED KINGDOM; ITALY; POLAND; CHLORINE ORGANIC COMPOUNDS; CHLORINATED HYDROCARBONS; POLYCHLORINATED TERPHENYLS; ANIMAL FEEDS; BIOACCUMULATION; INDUSTRIAL POLLUTION; SEWAGE; WATER POLLUTION
Jensen, A.A.; Jorgensen, K.F. 1983 Science of the Total Environment 27:231-250

Heron
ARDEA CINEREA

Tissue	Cases Exposure Route	Range	Mean	General Information
5193 Liver				Review. Occurrence of PCTs in aquatic organisms, wild and domestic birds and mammals. Seldom detected in birds. Levels higher in domestic than in wild mammals, perhaps in commercial animal food. Much lower pollution in Japan by PCTs than by PCBs.

REVIEW; ADIPOSE TISSUE; BODY; LIVER; MUSCLES; EGGS; AQUATIC; TERRESTRIAL; MAMMALS; BIRDS; ENVIRONMENTAL EXPOSURE; BALTIC SEA; CANADA; UNITED KINGDOM; ITALY; POLAND; CHLORINE ORGANIC COMPOUNDS; CHLORINATED HYDROCARBONS; POLYCHLORINATED TERPHENYLS; ANIMAL FEEDS; BIOACCUMULATION; INDUSTRIAL POLLUTION; SEWAGE; WATER POLLUTION
Jensen, A.A.; Jorgensen, K.F. 1983 Science of the Total Environment 27:231-250

Kestrel, European
FALCO TINNUNCULUS

Tissue	Cases Exposure Route	Range	Mean	General Information
5194 Liver				Review. Occurrence of PCTs in aquatic organisms, wild and domestic birds and mammals. Seldom detected in birds. Levels higher in domestic than in wild mammals, perhaps in commercial animal food. Much lower pollution in Japan by PCTs than by PCBs.

REVIEW; ADIPOSE TISSUE; BODY; LIVER; MUSCLES; EGGS; AQUATIC; TERRESTRIAL; MAMMALS; BIRDS; ENVIRONMENTAL EXPOSURE; BALTIC SEA; CANADA; UNITED KINGDOM; ITALY; POLAND; CHLORINE ORGANIC COMPOUNDS; CHLORINATED HYDROCARBONS; POLYCHLORINATED TERPHENYLS; ANIMAL FEEDS; BIOACCUMULATION; INDUSTRIAL POLLUTION; SEWAGE; WATER POLLUTION
Jensen, A.A.; Jorgensen, K.F. 1983 Science of the Total Environment 27:231-250

Terphenyl, chlorinated
61788-33-8
EXACT COMPOSITION UNKNOWN OR UNDETERMINED
Kingfisher
ALCEDO ATTHIS

Tissue	Cases Exposure Route	Range	Mean	General Information
5195 Liver				Review. Occurrence of PCTs in aquatic organisms, wild and domestic birds and mammals. Seldom detected in birds. Levels higher in domestic than in wild mammals, perhaps in commercial animal food. Much lower pollution in Japan by PCTs than by PCBs.

REVIEW; ADIPOSE TISSUE; BODY; LIVER; MUSCLES; EGGS; AQUATIC; TERRESTRIAL; MAMMALS; BIRDS; ENVIRONMENTAL EXPOSURE; BALTIC SEA; CANADA; UNITED KINGDOM; ITALY; POLAND; CHLORINE ORGANIC COMPOUNDS; CHLORINATED HYDROCARBONS; POLYCHLORINATED TERPHENYLS; ANIMAL FEEDS; BIOACCUMULATION; INDUSTRIAL POLLUTION; SEWAGE; WATER POLLUTION

Jensen, A.A.; Jorgensen, K.F. 1983 Science of the Total Environment 27:231-250

Owl, barn
TYTO ALBA

Tissue	Cases Exposure Route	Range	Mean	General Information
5196 Liver				Review. Occurrence of PCTs in aquatic organisms, wild and domestic birds and mammals. Seldom detected in birds. Levels higher in domestic than in wild mammals, perhaps in commercial animal food. Much lower pollution in Japan by PCTs than by PCBs.

REVIEW; ADIPOSE TISSUE; BODY; LIVER; MUSCLES; EGGS; AQUATIC; TERRESTRIAL; MAMMALS; BIRDS; ENVIRONMENTAL EXPOSURE; BALTIC SEA; CANADA; UNITED KINGDOM; ITALY; POLAND; CHLORINE ORGANIC COMPOUNDS; CHLORINATED HYDROCARBONS; POLYCHLORINATED TERPHENYLS; ANIMAL FEEDS; BIOACCUMULATION; INDUSTRIAL POLLUTION; SEWAGE; WATER POLLUTION

Jensen, A.A.; Jorgensen, K.F. 1983 Science of the Total Environment 27:231-250

Owl, long-eared
ASIO OTUS

Tissue	Cases Exposure Route	Range	Mean	General Information
5197 Liver				Review. Occurrence of PCTs in aquatic organisms, wild and domestic birds and mammals. Seldom detected in birds. Levels higher in domestic than in wild mammals, perhaps in commercial animal food. Much lower pollution in Japan by PCTs than by PCBs.

REVIEW; ADIPOSE TISSUE; BODY; LIVER; MUSCLES; EGGS; AQUATIC; TERRESTRIAL; MAMMALS; BIRDS; ENVIRONMENTAL EXPOSURE; BALTIC SEA; CANADA; UNITED KINGDOM; ITALY; POLAND; CHLORINE ORGANIC COMPOUNDS; CHLORINATED HYDROCARBONS; POLYCHLORINATED TERPHENYLS; ANIMAL FEEDS; BIOACCUMULATION; INDUSTRIAL POLLUTION; SEWAGE; WATER POLLUTION

Jensen, A.A.; Jorgensen, K.F. 1983 Science of the Total Environment 27:231-250

Terphenyl, chlorinated

61788-33-8
EXACT COMPOSITION UNKNOWN OR UNDETERMINED

Seal, gray
HALICHOERUS GRYPUS

Tissue	Cases Exposure Route	Range	Mean	General Information
5198 Body				Review. Occurrence of PCTs in aquatic organisms, wild and domestic birds and mammals. Seldom detected in birds. Levels higher in domestic than in wild mammals, perhaps in commercial animal food. Much lower pollution in Japan by PCTs than by PCBs.
REVIEW; ADIPOSE TISSUE; BODY; LIVER; MUSCLES; EGGS; AQUATIC; TERRESTRIAL; MAMMALS; BIRDS; ENVIRONMENTAL EXPOSURE; BALTIC SEA; CANADA; UNITED KINGDOM; ITALY; POLAND; CHLORINE ORGANIC COMPOUNDS; CHLORINATED HYDROCARBONS; POLYCHLORINATED TERPHENYLS; ANIMAL FEEDS; BIOACCUMULATION; INDUSTRIAL POLLUTION; SEWAGE; WATER POLLUTION				
Jensen, A.A.; Jorgensen, K.F. 1983 Science of the Total Environment 27:231-250				

Tetradecane

629-59-4
C14-H30
MW 198.40, MP 5.86 C, BP 253.7 C, VP 1 mm Hg at 76.4 C

Turtle, sea
CHELONIA MYDAS

Tissue	Cases Exposure Route	Range	Mean	General Information
5199 Liver	2	Not given	0.03 ug/g	Found dead after oilspill 6/79. Evidence of prolonged exposure to external oil Wt 1,025 and 990 g Mexico, Bay of Campeche, Laguna Madre General body condition poor GC-MS
MEXICO; LIVER; TURTLES; AQUATIC; HYDROCARBONS; BIOACCUMULATION; WATER POLLUTION; ENVIRONMENTAL EXPOSURE				
Hall, R.J.; Belisle, A.A.; Sileo, L. 1983 Journal of Wildlife Diseases 19(2):106-109				

Thorium
7440-29-1
Th
AtW 232.0381, MP 1842 + or - 30 C (also reported as 1690 and 1750 C)

Cattle
BOS sp.

Tissue	Cases Exposure Route	Range	Mean	General Information
5300 Hair	Ingestion	Not given	0.021 ppm	Data from one representative site. Deposition of elements on pasture. Collected Oct-Nov 1981-2. 5 yr old cows, 10 samples/farm, 9-14 farms, 7-12 sites. Significantly correlated with bulk deposition. Belgium NA

CATTLE; HAIR; BIOLOGICAL MONITORING; AIR POLLUTION; LAND POLLUTION; ARSENIC; BARIUM; BROMINE; CERIUM; COBALT; CHROMIUM; CESIUM; IRON; POTASSIUM; LANTHANUM; SODIUM; RUBIDIUM; ANTIMONY; SCANDIUM; SELENIUM; SAMARIUM; THORIUM; ZINC; FOOD CONTAMINATION; BIOACCUMULATION; BIOCONCENTRATION; TERRESTRIAL; ENVIRONMENTAL EXPOSURE; TRACE ELEMENTS

Ronneau, C.; Cara, J. 1984 Science of the Total Environment 39:135-142

Duck, long-tailed
CLANGULA HYEMALIS

Tissue	Cases Exposure Route	Range	Mean	General Information
5301 Heart	a) 50 b) 40	a) Not given b) Not given	a) <0.024 ug/kg b) <0.044 ug/kg	a) Males b) Females Collected 1980-81 Poland, Gdansk Bay Colorimetry
5302 Liver	a) 25 b) 20	a) 0.10-0.15 ug/kg b) 0.16-0.23 ug/kg	a) 0.12 +or- 0.03 ug/kg b) 0.19 +or- 0.04 ug/kg	a) Males b) Females Collected 1980-81 Poland, Gdansk Bay Colorimetry
5303 Muscle	a) 10 b) 10 c) 30 d) 30	a) 0.014-0.075 ug/kg b) 0.014-0.081 ug/kg c) Not given d) Not given	a) 0.036 +or- 0.021 ug/kg ug/kg b) 0.040 +or- 0.022 ug/kg c) 0.068 ug/kg d) 0.80 ug/kg	a) Breast, males b) Breast, females c) Leg, males d) Leg, females Collected 1980-81 Poland, Gdansk Bay Colorimetry
5304 Stomach	a) 25 b) 20	a) 0.63-0.68 ug/kg b) Not given	a) 0.65-0.02 ug/kg b) 0.79 ug/kg	a) Males b) Females Collected 1980-81 Poland, Gdansk Bay Colorimetry

BIRDS; URANIUM; THORIUM; POLAND; LIVER; MUSCLES; HEART; STOMACH; BIOACCUMULATION

Szefer, P.; Falandysz, J. 1983 Science of the Total Environment 29:277-280

Tin
7440-31-5
Sn
AtW 118.69, MP 231.9 C, BP 2507 C, VP 1 mm Hg at 1610 C, 10 mm Hg at 1890 C

Honeybee
APIS MELLIFERA L.

Tissue	Cases Exposure Route	Range	Mean	General Information
5205 Body		a) Not given b) Not given c) Not given d) Not given e) Not given f) 1.20-1.50 ppm	a) Not given b) <0.5 ppm c) <0.5 ppm d) <0.5 ppm e) 3.24 ppm f) 1.38 ppm	a) Controls, 1st summer b) Controls, 2nd summer c) Water repellant, 1st summer d) Water repellant, 2nd summer e) Tributyltin oxide (TBTO), 1st summer f) TBTO, 2nd summer Controls, untreated wood. Wood of beehives treated in 1980 to retentions of 1.9 kg/cu m (TBTO) or 3-min dip (Forest Products Laboratory water repellant). 5 colonies /treatment. Wisconsin, Madison AAS
INSECTS; ARSENIC; COPPER; TIN; ANIMAL POPULATIONS; WOOD PRESERVATIVES; PENTACHLOROPHENOL; CHROMIUM; DELIBERATE EXPOSURE; BODY; TERRESTRIAL; PESTICIDES				
Kalnins, M.A.; Detroy, B.F. 1984 Journal of Agricultural and Food Chemistry 32(5):1176-1180				

Toluene, 3,4-dichloro-alpha,alpha,alpha-trifluoro- (8 CI); Benzene, 1,2-dichloro-4-(trifluoromethyl)- (9 CI)
328-84-7
C7-H3-Cl2-F3
MW 214.99
Trout, rainbow
SALMO GAIRDNERI

Tissue	Cases Exposure Route	Range	Mean	General Information
5206 Body	6	a) Not given b) Not given c) Not given d) Not given e) Not given	a) 1.7+/-0.96 ng/g b) 1.7+/-0.57 ng/g c) 1.2+/-0.32 ng/g d) 1.5+/-0.46 ng/g e) 1.3+/-0.41 ng/g	a) Day 8 b) Day 21 c) Day 38 d) Day 58 e) Day 90 Days held in flow-through tanks to determine bioconcentration factor 5 chemicals tested at low levels in mixtures with minimal interactive effects Water level 1.0+/-0.23 ng/L. Canada, Ontario GC-EC
BODY; TROUT; AQUATIC; DELIBERATE EXPOSURE; ONTARIO; CANADA; BROMINE ORGANIC COMPOUNDS; CHLORINE ORGANIC COMPOUNDS; BIOCONCENTRATION; FISHES; INDUSTRIAL POLLUTION; WATER POLLUTION				
Oliver, B.G.; Niimi, A.J. 1984 Environmental Toxicology and Chemistry 3:271-277				

Toxaphene
8001-35-2
EXACT COMPOSITION UNKNOWN OR UNDETERMINED
Bass, largemouth
MICROPTERUS SALMOIDES

Tissue	Cases Exposure Route	Range	Mean	General Information
5207 Body	a) 5 b) 5	a) 5.52-15.2 ppm b) 2.33-5.30 ppm Wet wt	a) 8.96 ppm b) 3.58 ppm Wet wt	a) Lake Providence, 7.3% lipids b) Lake Bruin, 9.2% lipids Collected 6/15-9/25/80. Tertiary consumers, major foods are fish and crayfish. Lakes acting as sumps. Louisiana GC
BODY; ENVIRONMENTAL EXPOSURE; LOUISIANA; CHLORINE ORGANIC COMPOUNDS; INSECTICIDES; BIOMAGNIFICATION; FISHES; AGRICULTURE; PESTICIDE RESIDUES; AQUATIC; TERRESTRIAL; BIRDS; SNAKES; FROGS; CRAYFISH Niethammer, K.R.; White, D.H.; Baskett, T.S.; Sayre, M.W. 1984 Archives of Contamination and Toxicology 13:63-74				

Bluegill
LEPOMIS MACROCHIRUS

Tissue	Cases Exposure Route	Range	Mean	General Information
5208 Body	a) 5 b) 5	a) 0.13-3.37 ppm b) 0.32-1.12 ppm Wet wt	a) 1.17 ppm b) 0.76 ppm Wet wt	a) Lake Providence, 3.3% lipids b) Lake Bruin, 2.2% lipids Collected 6/15-9/25/80. Secondary consumers, major foods are fish. Lakes acting as sumps. Louisiana GC
BODY; ENVIRONMENTAL EXPOSURE; LOUISIANA; CHLORINE ORGANIC COMPOUNDS; INSECTICIDES; BIOMAGNIFICATION; FISHES; AGRICULTURE; PESTICIDE RESIDUES; AQUATIC; TERRESTRIAL; BIRDS; SNAKES; FROGS; CRAYFISH Niethammer, K.R.; White, D.H.; Baskett, T.S.; Sayre, M.W. 1984 Archives of Contamination and Toxicology 13:63-74				

Bullfrog
RANA CATESBEIANA

Tissue	Cases Exposure Route	Range	Mean	General Information
5209 Body	1	Not detected-0.97 ppm Wet wt	0.09 ppm Wet wt	Lake Providence, 1.7% lipids. Collected 6/15-9/25/80. Secondary consumers, major foods are crayfish and insects. Lakes acting as sumps. Louisiana GC
BODY; ENVIRONMENTAL EXPOSURE; LOUISIANA; CHLORINE ORGANIC COMPOUNDS; INSECTICIDES; BIOMAGNIFICATION; FISHES; AGRICULTURE; PESTICIDE RESIDUES; AQUATIC; TERRESTRIAL; BIRDS; SNAKES; FROGS; CRAYFISH Niethammer, K.R.; White, D.H.; Baskett, T.S.; Sayre, M.W. 1984 Archives of Contamination and Toxicology 13:63-74				

Toxaphene
8001-35-2
EXACT COMPOSITION UNKNOWN OR UNDETERMINED
Catfish, channel
ICTALURUS PUNETATUS

Tissue	Cases Exposure Route	Range	Mean	General Information
5210 Body	4	0.90-5.94 ppm Wet wt	2.27 ppm Wet wt	Lake Providence, 2.9% lipids. Collected 6/15-9/25/80. Tertiary consumers, major foods are fish and insects. Lakes acting as sumps. Louisiana GC
BODY; ENVIRONMENTAL EXPOSURE; LOUISIANA; CHLORINE ORGANIC COMPOUNDS; INSECTICIDES; BIOMAGNIFICATION; FISHES; AGRICULTURE; PESTICIDE RESIDUES; AQUATIC; TERRESTRIAL; BIRDS; SNAKES; FROGS; CRAYFISH				
Niethammer, K.R.; White, D.H.; Baskett, T.S.; Sayre, M.W. 1984 Archives of Contamination and Toxicology 13:63-74				

Clam, Asiatic
CORBICULA MANILENSIS

Tissue	Cases Exposure Route	Range	Mean	General Information
5211 Body, whole	9	<10-300 ug/kg Dry wt	<10 ug/kg Dry wt Median	Trend in concentration increase from inorganic to organic to living material. August 1979-May 1980, sampling dates. Non-point sources. No significant seasonal, temporal or spatial variablity reported. Florida, Apalachicola River GC-EC
BODY; ASIATIC CLAM; AQUATIC; ENVIRONMENTAL EXPOSURE; FLORIDA; TRACE ELEMENTS; PESTICIDES; POLYCHLORINATED BIPHENYLS; CHROMIUM; COPPER; LEAD; MANGANESE; MERCURY; ZINC; DDD; ORGANOPHOSPHATES; DDE; DDT; DIELDRIN; HEPTACHLOR EPOXIDE; INSECTICIDES; GEOLOGY				
Elder, J.F.; Mattraw, H.C. 1984 Archives of Environmental Contamination and Toxicology 13:453-469				

Coot, American
FULICA AMERICANA

Tissue	Cases Exposure Route	Range	Mean	General Information
5212 Body	4	0.59-1.89 ppm Wet wt	1.02 ppm Wet wt	Lake Providence, 10.6% lipids. Collected 2/80. Secondary consumers. Lakes acting as sumps. Louisiana GC
BODY; ENVIRONMENTAL EXPOSURE; LOUISIANA; CHLORINE ORGANIC COMPOUNDS; INSECTICIDES; BIOMAGNIFICATION; FISHES; AGRICULTURE; PESTICIDE RESIDUES; AQUATIC; TERRESTRIAL; BIRDS; SNAKES; FROGS; CRAYFISH				
Niethammer, K.R.; White, D.H.; Baskett, T.S.; Sayre, M.W. 1984 Archives of Contamination and Toxicology 13:63-74				

Toxaphene
8001-35-2
EXACT COMPOSITION UNKNOWN OR UNDETERMINED
Cottonmouth
AGKISTRODON PISCIVOROUS

Tissue	Cases Exposure Route	Range	Mean	General Information
5213 Body	a) 8 b) 2 c) 1	a) Not detected-4.53 ppm b) Not detected-0.51 ppm c) Not given Wet wt	a) 0.53 ppm b) 0.07 ppm c) 0.30 ppm Wet wt	a) Lake Providence, 4.3% lipids b) Lake Bruin, 2.5% lipids c) Lake St. John, 2.4% lipids Collected 6/15-9/25/80. Tertiary consumers, major foods are snakes, fish and frogs. Lakes acting as sumps. Louisiana GC

BODY; ENVIRONMENTAL EXPOSURE; LOUISIANA; CHLORINE ORGANIC COMPOUNDS; INSECTICIDES; BIOMAGNIFICATION; FISHES; AGRICULTURE; PESTICIDE RESIDUES; AQUATIC; TERRESTRIAL; BIRDS; SNAKES; FROGS; CRAYFISH
Niethammer, K.R.; White, D.H.; Baskett, T.S.; Sayre, M.W. 1984 Archives of Contamination and Toxicology 13:63-74

Eagle, bald
HALIAEETUS LEUCOCEPHALUS

Tissue	Cases Exposure Route	Range	Mean	General Information
5214 Eggs	27	a) Not applicable b) Not applicable c) 0.03-0.84 ppm d) Not applicable e) Not applicable f) 0.03-0.05 ppm g) Not applicable Fresh wet wt	a) 0.04 ppm b) 0.04 ppm c) 0.14 ppm d) 0.05 ppm e) 0.04 ppm f) 0.04 ppm g) 0.05 ppm Fresh wet wt	a) AZ, 1977, 1 egg b) MN, 1977, 1 egg c) WI, 1976-79, 17 eggs d) MI, 1978, 1 egg e) NY, 1977, 1 egg f) ME, 1975, 1977, 5 eggs g) LA, 1979, 1 egg Most frequently (17 of 38 eggs) and in highest levels in WI. Seldom found in other areas (10 of 83). GE-EC; GC-MS; Silica gel chrom.

EGGS; EAGLES; BIRDS; ENVIRONMENTAL EXPOSURE; ALASKA; ARIZONA; CALIFORNIA; DELAWARE; FLORIDA; LOUISIANA; MAINE; MARYLAND; MICHIGAN; MINNESOTA; NEW YORK; OHIO; OREGON; VIRGINIA; WISCONSIN; UNITED STATES; CHLORINATED HYDROCARBONS; CHLORINE ORGANIC COMPOUNDS; DDD; DDE; DDT; DIELDRIN; HEXACHLOROBENZENE; INSECTICIDES; MERCURY; PESTICIDES; POLYCHLORINATED BIPHENYLS; BIOACCUMULATION; PESTICIDE RESIDUES; POPULATION EXPOSURE
Wiemeyer, S.N.; Lamont, T.G.; Bunck, C.M.; Sindelar, C.R.; Gramlich, F.J.; Fraser, J.D.; Byrd, M.A. 1984 Archives of Environmental Contamination and Toxicology 13:529-549

Frog, southern leopard
RANA SPHENOCEPHALA

Tissue	Cases Exposure Route	Range	Mean	General Information
5215 Body	1	Not detected-0.49 ppm Wet wt	0.09 ppm Wet wt	Lake Providence, 3.3% lipids. Collected 6/15-9/25/80. Secondary consumer, major foods are small invertebrates. Lakes acting as sumps. Louisiana GC

BODY; ENVIRONMENTAL EXPOSURE; LOUISIANA; CHLORINE ORGANIC COMPOUNDS; INSECTICIDES; BIOMAGNIFICATION; FISHES; AGRICULTURE; PESTICIDE RESIDUES; AQUATIC; TERRESTRIAL; BIRDS; SNAKES; FROGS; CRAYFISH
Niethammer, K.R.; White, D.H.; Baskett, T.S.; Sayre, M.W. 1984 Archives of Contamination and Toxicology 13:63-74

Toxaphene
8001-35-2
EXACT COMPOSITION UNKNOWN OR UNDETERMINED
Gar, spotted
LEPISOSTEUS OCULATUS

Tissue	Cases Exposure Route	Range	Mean	General Information
5216 Body	a) 1 b) 5	a) Not given b) 1.48-5.95 ppm Wet wt	a) 18.8 ppm b) 2.45 ppm Wet wt	a) Lake Providence, 11.1% lipids b) Lake Bruin, 2.7% lipids Collected 6/15-9/25/80. Tertiary consumers, major foods are fish. Lakes acting as sumps. Louisiana GC
BODY; ENVIRONMENTAL EXPOSURE; LOUISIANA; CHLORINE ORGANIC COMPOUNDS; INSECTICIDES; BIOMAGNIFICATION; FISHES; AGRICULTURE; PESTICIDE RESIDUES; AQUATIC; TERRESTRIAL; BIRDS; SNAKES; FROGS; CRAYFISH Niethammer, K.R.; White, D.H.; Baskett, T.S.; Sayre, M.W. 1984 Archives of Contamination and Toxicology 13:63-74				

Heron, black-crowned night
NYCTICORAX NYCTICORAX

Tissue	Cases Exposure Route	Range	Mean	General Information
5217 Eggs	147	0.07-0.52 ppm	0.25 ppm Geometric mean	Collected between May 17 and June 1, 1979. Possible sources: nesting and feeding habitats, or migration routes and wintering grounds in Mexico. Colorado; Wyoming GC; EC
EGGS; BIRDS; ENVIRONMENTAL EXPOSURE; COLORADO; WYOMING; CHLORINE ORGANIC COMPOUNDS; DDD; DDE; DDT; DIELDRIN; HEPTACHLOR EPOXIDE; OXYCHLORDANE; NONACHLOR; HEXACHLOROBENZENE; HEXACHLOROCYCLOHEXANE; POLYCHLORINATED BIPHENYLS; ANIMAL POPULATIONS; BIOLOGICAL MONITORING; PESTICIDE RESIDUES; LAND POLLUTION; WATER POLLUTION; AQUATIC McEwen, L.C.; Stafford, C.J.; Hensler, G.L 1984 Environmental Toxicology and Chemistry 3:367-376				

Heron, green-backed
BUTORIDES STRIATUS

Tissue	Cases Exposure Route	Range	Mean	General Information
5218 Adipose		Not given	65.4 ppm Wet wt	Composite from birds shot in 1980. High levels linked to fish diet.
5219 Body	a) 12 b) 14 Ingestion	a) 0.51-13.4 ppm b) Not detected-24.0 ppm Wet wt	a) 3.88 ppm b) 2.10 ppm Wet wt Geometric means	a) Adults, mean lipid 16.2% b) Immature, mean lipid 14.8%, 13 had detectable levels Collected (shot) in 1980. Beak, feet, wing tips, skin, GI tract removed before homogenization. Residues linked to fish diet. Louisiana, Lake Province, Lake Bruin, Lake St. John GC; GC/MS
CHLORINE ORGANIC COMPOUNDS; FISHES; LOUISIANA; PESTICIDE RESIDUES; BIOACCUMULATION; DIETS; ADIPOSE TISSUE; LIVER; MUSCLES; BRAIN; BIOLOGICAL MONITORING; ENVIRONMENTAL EXPOSURE; BIRDS; WATERFOWL; AQUATIC; TERRESTRIAL; WATER POLLUTION; DDD; DDE; DDT; DIELDRIN; POLYCHLORINATED BIPHENYLS Niethammer, K.R.; Baskett, T.S.; White, D.H. 1984 Bulletin of Environmental Contamination and Toxicology 33:491-498				

Toxaphene
8001-35-2
EXACT COMPOSITION UNKNOWN OR UNDETERMINED

Heron, green-backed
BUTORIDES STRIATUS

Tissue	Cases Exposure Route	Range	Mean	General Information
5220 Body	a) 10 b) 9 c) 6	a) 2.37-24.0 ppm b) Not detected-13.4 ppm c) 0.51-1.00 ppm Wet wt	a) 7.58 ppm b) 2.40 ppm c) 0.70 ppm Wet wt	a) Lake Providence, 11.4% lipids b) Lake Bruin, 12.9% lipids c) Lake St. John, 26.7% lipids Collected between 6/15-9/25/80. Tertiary consumers, major foods are fish. Lakes acting as sumps. Immature birds are good monitors of contamination. Louisiana GC

BODY; ENVIRONMENTAL EXPOSURE; LOUISIANA; CHLORINE ORGANIC COMPOUNDS; INSECTICIDES; BIOMAGNIFICATION; FISHES; AGRICULTURE; PESTICIDE RESIDUES; AQUATIC; TERRESTRIAL; BIRDS; SNAKES; FROGS; CRAYFISH
Niethammer, K.R.; White, D.H.; Baskett, T.S.; Sayre, M.W. 1984 Archives of Contamination and Toxicology 13:63-74

Tissue	Cases Exposure Route	Range	Mean	General Information
5221 Brain	4 Ingestion	Not given	0.54 ppm Wet wt	Composite from birds shot in 1980. High levels linked to fish diet. Louisiana, Lake Providence GC; GC/MS
5222 Liver		Not given	21.7 ppm Wet wt	Composite from birds shot in 1980. High levels linked to fish diet.
5223 Muscle	4 Ingestion	Not given	1.02 ppm Wet wt	Composite from birds shot in 1980. High levels linked to fish diet. Louisiana, Lake Providence GC; GC/MS

CHLORINE ORGANIC COMPOUNDS; FISHES; LOUISIANA; PESTICIDE RESIDUES; BIOACCUMULATION; DIETS; ADIPOSE TISSUE; LIVER; MUSCLES; BRAIN; BIOLOGICAL MONITORING; ENVIRONMENTAL EXPOSURE; BIRDS; WATERFOWL; AQUATIC; TERRESTRIAL; WATER POLLUTION; DDD; DDE; DDT; DIELDRIN; POLYCHLORINATED BIPHENYLS
Niethammer, K.R.; Baskett, T.S.; White, D.H. 1984 Bulletin of Environmental Contamination and Toxicology 33:491-498

Heron, little blue
EGRETTA CAERULEA

Tissue	Cases Exposure Route	Range	Mean	General Information
5224 Body	a) 6 b) 15 Ingestion	a) 0.76-18.1 ppm b) Not detected-3.44 ppm Wet wt	a) 3.78 ppm b) 0.62 ppm Wet wt	a) Adults, 6 had detectable levels, mean lipid 10.8% b) Immature, 14 had detectable levels, mean lipid 8.2% Collected (shot) 1980. Beak, feet, skin, wing tips and GI tracts removed before homogenization. Moderate residues linked to mixed diet of fish, crustaceans and insects. Louisana, Lake Providence, Lake Bruin, Lake St. John GC; GC/MS

CHLORINE ORGANIC COMPOUNDS; FISHES; LOUISIANA; PESTICIDE RESIDUES; BIOACCUMULATION; DIETS; ADIPOSE TISSUE; LIVER; MUSCLES; BRAIN; BIOLOGICAL MONITORING; ENVIRONMENTAL EXPOSURE; BIRDS; WATERFOWL; AQUATIC; TERRESTRIAL; WATER POLLUTION; DDD; DDE; DDT; DIELDRIN; POLYCHLORINATED BIPHENYLS
Niethammer, K.R.; Baskett, T.S.; White, D.H. 1984 Bulletin of Environmental Contamination and Toxicology 33:491-498

Toxaphene
8001-35-2
EXACT COMPOSITION UNKNOWN OR UNDETERMINED

Heron, little blue
EGRETTA CAERULEA

Tissue	Cases Exposure Route	Range	Mean	General Information
5225 Body	a) 5 b) 10 c) 5	a) 0.60-3.44 ppm b) 0.26-18.1 ppm c) Not detected-0.76 ppm Wet wt	a) 1.39 ppm b) 1.04 ppm c) 0.28 ppm Wet wt	a) Lake Providence, 3.7% lipids b) Lake Bruin, 6.0% lipids c) Lake St. John, 18.2% lipids Collected 6/15-9/25/80. Tertiary consumer, major foods are small fish and invertebrates. Lakes acting as sumps. Louisiana GC

BODY; ENVIRONMENTAL EXPOSURE; LOUISIANA; CHLORINE ORGANIC COMPOUNDS; INSECTICIDES; BIOMAGNIFICATION; FISHES; AGRICULTURE; PESTICIDE RESIDUES; AQUATIC; TERRESTRIAL; BIRDS; SNAKES; FROGS; CRAYFISH
Niethammer, K.R.; White, D.H.; Baskett, T.S.; Sayre, M.W. 1984 Archives of Contamination and Toxicology 13:63-74

Heron, yellow-crowned night
NYCTICORAX VIOLACEUS

Tissue	Cases Exposure Route	Range	Mean	General Information
5226 Body	a) 4 b) 13 Ingestion	a) Not detected-0.53 ppm b) Not detected-0.44 ppm Wet wt	a) 0.16 ppm b) 0.10 ppm Wet wt Geometric means	a) Adult, 2 had detectable levels, mean lipid 18.7% b) Immature, 5 had detectable levels, mean lipid 8.6% Collected (shot) 1980. Beak, feet, wing tips, skin, and GI tract removed before homogenization. Low residues linked to crayfish diet. Louisana, Lake Providence, Lake Bruin, Lake St. John GC; GC/MS

CHLORINE ORGANIC COMPOUNDS; FISHES; LOUISIANA; PESTICIDE RESIDUES; BIOACCUMULATION; DIETS; ADIPOSE TISSUE; LIVER; MUSCLES; BRAIN; BIOLOGICAL MONITORING; ENVIRONMENTAL EXPOSURE; BIRDS; WATERFOWL; AQUATIC; TERRESTRIAL; WATER POLLUTION; DDD; DDE; DDT; DIELDRIN; POLYCHLORINATED BIPHENYLS
Niethammer, K.R.; Baskett, T.S.; White, D.H. 1984 Bulletin of Environmental Contamination and Toxicology 33:491-498

Tissue	Cases Exposure Route	Range	Mean	General Information
5227 Body	a) 4 b) 1 c) 2	a) Not detected-0.53 ppm b) Not detected-0.44 ppm c) 0.21-0.46 ppm Wet wt	a) 0.09 ppm b) 0.15 ppm c) 0.31 ppm Wet wt	a) Lake Providence, 11.4% lipids b) Lake Bruin, 16% lipids c) Lake St. John, 17.4% lipids Collected 6/15-9/25/80. Secondary consumer. Lakes acting as sumps. Louisiana GC

BODY; ENVIRONMENTAL EXPOSURE; LOUISIANA; CHLORINE ORGANIC COMPOUNDS; INSECTICIDES; BIOMAGNIFICATION; FISHES; AGRICULTURE; PESTICIDE RESIDUES; AQUATIC; TERRESTRIAL; BIRDS; SNAKES; FROGS; CRAYFISH
Niethammer, K.R.; White, D.H.; Baskett, T.S.; Sayre, M.W. 1984 Archives of Contamination and Toxicology 13:63-74

Toxaphene
8001-35-2
EXACT COMPOSITION UNKNOWN OR UNDETERMINED
Merganser, red-breasted
MERGUS SERRATOR

Tissue	Cases Exposure Route	Range	Mean	General Information
5228 Eggs	a) 40 b) 40	a) Not applicable b) Not applicable	a) 0.12 ppm b) 0.22 ppm Wet wt Geometric means	a) Randomly selected b) Unhatched Collected 1977, pairs from same nests analysed. No significant difference. Lower limit 0.10 ppm. Lake Michigan, northwestern islands GLC
EGGS; AQUATIC; BIRDS; WATERFOWL; ENVIRONMENTAL EXPOSURE; GREAT LAKES; BROMINATED HYDROCARBONS; CHLORINATED HYDROCARBONS; BROMINE ORGANIC COMPOUNDS; CHLORINE ORGANIC COMPOUNDS; DDE; DDT; DIELDRIN; HEPTACHLOR EPOXIDE; HEXACHLOROBENZENE; INSECTICIDES; MERCURY; NONACHLOR; OXYCHLORDANE; PESTICIDES; POLYBROMINATED BIPHENYLS; POLYCHLORINATED BIPHENYLS; BIOACCUMULATION				
Haseltine, S.D.; Heinz, G.H.; Hensler, G.L.; Reichel, W.L. 1983 Environmental Pollution 32:211-232				

Mosquitofish
GAMBUSIA AFFINIS

Tissue	Cases Exposure Route	Range	Mean	General Information
5229 Body	5	1.62-2.84 ppm Wet wt	2.19 ppm Wet wt	Lake Providence, 2.6% lipids. Collected 6/15-9/25/80. Secondary consumers, major foods are small invertebrates. Lakes acting as sumps. Louisiana GC
BODY; ENVIRONMENTAL EXPOSURE; LOUISIANA; CHLORINE ORGANIC COMPOUNDS; INSECTICIDES; BIOMAGNIFICATION; FISHES; AGRICULTURE; PESTICIDE RESIDUES; AQUATIC; TERRESTRIAL; BIRDS; SNAKES; FROGS; CRAYFISH				
Niethammer, K.R.; White, D.H.; Baskett, T.S.; Sayre, M.W. 1984 Archives of Contamination and Toxicology 13:63-74				

Shad, threadfin
DOROSOMA PETENENSE

Tissue	Cases Exposure Route	Range	Mean	General Information
5230 Body	a) 5 b) 5	a) 1.54-3.17 ppm b) 0.80-2.02 ppm Wet wt	a) 2.06 ppm b) 1.20 ppm Wet wt	a) Lake Providence, 4.4% lipids b) Lake Bruin, 5.0% lipids Collected 6/15-9/25/80. Primary consumers, major foods are green algae and protozoans. Lakes acting as sumps. Louisiana GC
BODY; ENVIRONMENTAL EXPOSURE; LOUISIANA; CHLORINE ORGANIC COMPOUNDS; INSECTICIDES; BIOMAGNIFICATION; FISHES; AGRICULTURE; PESTICIDE RESIDUES; AQUATIC; TERRESTRIAL; BIRDS; SNAKES; FROGS; CRAYFISH				
Niethammer, K.R.; White, D.H.; Baskett, T.S.; Sayre, M.W. 1984 Archives of Contamination and Toxicology 13:63-74				

Toxaphene
8001-35-2
EXACT COMPOSITION UNKNOWN OR UNDETERMINED
Shiner, blacktailed
NOTROPIS VENUSTUS

Tissue	Cases Exposure Route	Range	Mean	General Information
5231 Body	a) 5 b) 5	a) 2.56-4.54 ppm b) 0.40-1.51 ppm Wet wt	a) 3.30 ppm b) 1.04 ppm Wet wt	a) Lake Providence, 4.8% lipids b) Lake Bruin, 6.8% lipids. Collected 6/15-9/25/80. Secondary consumers, major foods are small invertebrates. Lakes acting as sumps. Louisiana GC
BODY; ENVIRONMENTAL EXPOSURE; LOUISIANA; CHLORINE ORGANIC COMPOUNDS; INSECTICIDES; BIOMAGNIFICATION; FISHES; AGRICULTURE; PESTICIDE RESIDUES; AQUATIC; TERRESTRIAL; BIRDS; SNAKES; FROGS; CRAYFISH				
Niethammer, K.R.; White, D.H.; Baskett, T.S.; Sayre, M.W. 1984 Archives of Contamination and Toxicology 13:63-74				

Snake, water
NERODIA sp.

Tissue	Cases Exposure Route	Range	Mean	General Information
5232 Body	a) 10 b) 8 c) 5	a) 2.61-10.4 ppm b) Not detected-17.2 ppm c) Not detected-2.87 ppm Wet wt	a) 5.47 ppm b) 1.40 ppm c) 0.30 ppm Wet wt	a) Lake Providence, 5.7% lipids b) Lake Bruin, 3.7% lipids c) Lake St. John, 6.6% lipids Collected 6/15-9/25/80. Tertiary consumers, major foods are fish and frogs. Lakes acting as sumps. Louisiana GC
BODY; ENVIRONMENTAL EXPOSURE; LOUISIANA; CHLORINE ORGANIC COMPOUNDS; INSECTICIDES; BIOMAGNIFICATION; FISHES; AGRICULTURE; PESTICIDE RESIDUES; AQUATIC; TERRESTRIAL; BIRDS; SNAKES; FROGS; CRAYFISH				
Niethammer, K.R.; White, D.H.; Baskett, T.S.; Sayre, M.W. 1984 Archives of Contamination and Toxicology 13:63-74				

Trichothec-9-en-8-one, 12,13-epoxy-3,7,15-trihydroxy-, (3alpha,7alpha)-
51481-10-8
C15-H20-O6
Cattle
BOS sp.

Tissue	Cases Exposure Route	Range	Mean	General Information
5233 Milk	1 Ingestion	a) 1-2 ng/ml b) 2-3 ng/ml c) <1 ng/ml d) 1-2 ng/ml	a) Not given b) Not given c) Not given d) Not given	a) 8 hr after dose, free deoxynivalenol (DON) b) 8 hr, total DON c) 20 hr, free DON d) 20 hr, total DON 920 mg DON in FUSARIUM-contaminated corn administered by tube into rumen. Free DON: No pretreatment. Total DON: Pretreatment with Beta-glucuronidase. Trace amounts (<1 ng/ml) found in 2nd cow at 8 and 20 hr. Not detected, 32-56 hr after treatment. GC/MS
MILK; TERRESTRIAL; CATTLE; DELIBERATE EXPOSURE; FOOD CONTAMINATION; LACTATION				
Prelusky, D.B.; Trenholm, H.L.; Lawrence, G.A.; Scott, P.M. 1984 Journal of Environmental Science & Health B19(7):593-609				

Triclosan methyl (No postings in CHEMLINE).

Clam, short-necked
TAPES PHILIPPINARUM

Tissue	Cases Exposure Route	Range	Mean	General Information
5234 Body	a) 1 b) 1 Ingestion	Not applicable	3 ppb	Collected at Keihinjima along Tokyo Bay, Japan. Japan GC/MS
BODY; FISHES; SHELLFISH; AQUATIC; ENVIRONMENTAL EXPOSURE; JAPAN; CHLORINE ORGANIC COMPOUNDS; ANTIBIOTICS; BIOACCUMULATION; WATER POLLUTION Miyazaki, T.; Yamagishi, T.; Matsumoto, M. 1984 Bulletin of Environmental Contamination and Toxicology 32:277-282				

Clam, thin-shelled surf
MACTRA VENERIFORMIS

Tissue	Cases Exposure Route	Range	Mean	General Information
5235 Body	1 Ingestion	Not applicable	5 ppm	Collected at Keihinjima along Tokyo Bay, Japan. Japan GC/MS
BODY; FISHES; SHELLFISH; AQUATIC; ENVIRONMENTAL EXPOSURE; JAPAN; CHLORINE ORGANIC COMPOUNDS; ANTIBIOTICS; BIOACCUMULATION; WATER POLLUTION Miyazaki, T.; Yamagishi, T.; Matsumoto, M. 1984 Bulletin of Environmental Contamination and Toxicology 32:277-282				

Goby
ACANTHOGOBIUS FLAVIMANUS

Tissue	Cases Exposure Route	Range	Mean	General Information
5236 Body	a) 1 b) 1 Ingestion	Not applicable	a) 2 ppb b) 1 ppb	Specimens collected on Tama River within 10 km of Tokyo Bay, Japan. Japan GC/MS
BODY; FISHES; SHELLFISH; AQUATIC; ENVIRONMENTAL EXPOSURE; JAPAN; CHLORINE ORGANIC COMPOUNDS; ANTIBIOTICS; BIOACCUMULATION; WATER POLLUTION Miyazaki, T.; Yamagishi, T.; Matsumoto, M. 1984 Bulletin of Environmental Contamination and Toxicology 32:277-282				

Triclosan methyl (No postings in CHEMLINE).

Gudgeon, topmouth
P. PARVA

Tissue	Cases Exposure Route	Range	Mean	General Information
5237 Body	a) 1 b) 1 c) 1 d) 1 e) 1 f) 1 g) 1 Ingestion	Not applicable	a) 1 ppb b) 7 ppb c) 6 ppm d) 14 ppm e) 19 ppm f) 28 ppm g) 38 ppm	a) Site A-1 b) A-2 c) A-3 d) A-4 e) A-5 f) A-6 g) A-7 Collection sites along 40 km stretch of Tama River, Japan. Concentration increased downstream. Japan GC/MS

BODY; FISHES; SHELLFISH; AQUATIC; ENVIRONMENTAL EXPOSURE; JAPAN; CHLORINE ORGANIC COMPOUNDS; ANTIBIOTICS; BIOACCUMULATION; WATER POLLUTION
Miyazaki, T.; Yamagishi, T.; Matsumoto, M. 1984 Bulletin of Environmental Contamination and Toxicology 32:277-282

Mussel, blue
MYTILUS EDULIS

Tissue	Cases Exposure Route	Range	Mean	General Information
5238 Body	1 Ingestion	Not applicable	20 ppb	Collected at Keihinjima along Tokyo Bay, Japan. Japan GC/MS

BODY; FISHES; SHELLFISH; AQUATIC; ENVIRONMENTAL EXPOSURE; JAPAN; CHLORINE ORGANIC COMPOUNDS; ANTIBIOTICS; BIOACCUMULATION; WATER POLLUTION
Miyazaki, T.; Yamagishi, T.; Matsumoto, M. 1984 Bulletin of Environmental Contamination and Toxicology 32:277-282

Oyster
CRASSOSTREA GIGAS

Tissue	Cases Exposure Route	Range	Mean	General Information
5239 Body	1 Ingestion	Not applicable	13 ppb	Collected at Keihinjima along Tokyo Bay, Japan. Japan GC/MS

BODY; FISHES; SHELLFISH; AQUATIC; ENVIRONMENTAL EXPOSURE; JAPAN; CHLORINE ORGANIC COMPOUNDS; ANTIBIOTICS; BIOACCUMULATION; WATER POLLUTION
Miyazaki, T.; Yamagishi, T.; Matsumoto, M. 1984 Bulletin of Environmental Contamination and Toxicology 32:277-282

Tridecane
629-50-5
C13-H28
MW 184.37, MP -5.5 C, BP 235.4 C, VP 1 mm Hg at 59.4 C

Turtle, sea
CHELONIA MYDAS

Tissue	Cases Exposure Route	Range	Mean	General Information
5240 Liver	2	Not given	0.02 ug/g	Found dead after oilspill 6/79. Evidence of prolonged exposure to external oil. Wt 1,025 and 990 g Mexico, Bay of Campeche, Laguna Madre General body condition poor GC/MS
MEXICO; LIVER; TURTLES; AQUATIC; HYDROCARBONS; BIOACCUMULATION; WATER POLLUTION; ENVIRONMENTAL EXPOSURE				
Hall, R.J.; Belisle, A.A.; Sileo, L. 1983 Journal of Wildlife Diseases 19(2):106-109				

Uranium
7440-61-1
U
AtW 238.029, MP 1132 C, BP 3818 C, VP 100 mm Hg at 3270 C

Duck, long-tailed
CLANGULA HYEMALIS

Tissue	Cases Exposure Route	Range	Mean	General Information
5241 Heart	a) 50 b) 40	a) Not given b) Not given	a) 0.032 ug/kg b) 0.24 ug/kg	a) Males b) Females Collected 1980-81 Poland, Gdansk Bay Colorimetry
5242 Liver	a) 25 b) 20	a) 0.15-0.19 ug/kg b) Not given	a) 0.17+or-0.02 ug/kg b) <0.046 ug/kg	a) Males b) Females Collected 1980-81 Poland, Gdansk Bay Colorimetry
5243 Muscle	a) 10 b) 10 c) 30 d) 30	a) 0.025-0.081 ug/kg b) 0.027-0.090 ug/kg c) Not given d) Not given	a) 0.055 +or- 0.016 ug/kg 0.055 +or- 0.010 ug/kg c) 0.3[illegible] ug/kg d) 0.045 ug/ kg	a) Breast, males b) Breast, females c) Leg, males d) Leg, females Collected 1980-81 Poland, Gdansk Bay Colorimetry
5244 Stomach	a) 25 b) 20	a) 0.29-0.42 ug/kg b) Not given	a) 0.35 +or- 0.07 ug/kg b) 0.40 ug/kg	a) Males b) Females Collected 1980-81 Poland, Gdansk Bay Colorimetry
BIRDS; URANIUM; THORIUM; POLAND; LIVER; MUSCLES; HEART; STOMACH; BIOACCUMULATION				
Szefer, P.; Falandysz, J. 1983 Science of the Total Environment 29:277-280				

Uranium
7440-61-1
U
AtW 238.029, MP 1132 C, BP 3818 C, VP 100 mm Hg at 3270 C

Trout, brook
SALVELINUS FONTINALIS

Tissue	Cases Exposure Route	Range	Mean	General Information
5245 Body, whole		a) 1.94-4.28 mg/kg per mg of U/l b) 1.0-18.0 mg/kg, estimated from figure Range of means Wet wt	a) Not applicable b) Not applicable	a) Bioconcentration factors. 0.08-0.23 mg/l exposure levels b) 0.23-9.08 mg/l exposure levels 60-d post-hatch, embryo-larval toxicity test (eggs from commercial hatchery) High alkalinity and hardness of water (201 and 189 mg/l as $CaCO_3$, ph 8.0, 18.5 deg C) reduce toxicity and bioavailability of U. Colorado, Gunnison Fluorometric spectroscopy
5246 Muscle	16	a) 0.00015-0.089 mg/kg b) 0.08-5.9 mg/kg per mg of U/l Ranges of means Wet wt	a) Not applicable b) Not applicable	a) Muscle-skin combined, 4 fish from each of 4 sites compared by site b) Bioconcentration factors (BCF). Same muscle-skin samples used for a) above BPC higher in both Marshall Creek sampling sites than in Tomichi Creek sites. Colorado, Gunnison Fluorometric spectroscopy
5247 Skin	16	a) 0.00015-0.089 mg/kg b) 0.08-5.9 mg/kg per mg of U/l Ranges of means Wet wt	a) Not applicable b) Not applicable	a) Skin-muscle combined, 4 fish from each of 4 sites compared by site b) Bioconcentration factors (BFC). Same skin-muscle samples used for a) above BCF higher in both Marshall Creek sampling sites than in Tomichi Creek sites. Colorado, Gunnison Fluorometric spectroscopy

BODY; MUSCLES; SKIN; AQUATIC; DELIBERATE EXPOSURE; ENVIRONMENTAL EXPOSURE; COLORADO; ADULTS; JUVENILES; COMPARATIVE EVALUATIONS; URANIUM; BIOACCUMULATION; BIOLOGICAL MONITORING; FISHES; RADIONUCLIDES
Parkhurst, B.R.; Elder, R.G.; Meyer, J.S.; Sanchez, D.A.; Pennak, R.W.; Waller, W.T. 1984 Environmental Toxicology and Chemistry 3:113-124

Vanadium
7440-62-2
V
AtW 50.9414, MP 1917 C, BP 3000 C, VP 1 mm Hg at 2290 C, 10 mm Hg at 2570 C

Queenfish

Tissue	Cases Exposure Route	Range	Mean	General Information
5248 Gastrointestinal tract	1	Not applicable	2.95 ug/g Wet wt	Exposed to tar flakes from damaged Iranian oil wells. Releases (since 2/83) of 4000 bbl/d of crude oil with high levels of Ni and V caused kills. Specimens collected 4/83. Saudi Arabia, Arabian Gulf; Iran, Nowrus oil field AAS

(next page)

Vanadium
7440-62-2
V
AtW 50.9414, MP 1917 C, BP 3000 C, VP 1 mm Hg at 2290 C, 10 mm Hg at 2570 C

Queenfish

(continued)

Tissue	Cases Exposure Route	Range	Mean	General Information
5249 Liver	1	Not applicable	3.95 ug/g Wet wt	Exposed to tar flakes from damaged Iranian oil wells. Releases (since 2/83) of 4000 bbl/d of crude oil with high levels of Ni and V caused kills. Specimens collected 4/83. Saudi Arabia, Arabian Gulf; Iran, Nowruz oil field AA3
5250 Muscle	1	Not applicable	0.93 ug/g Wet wt	Exposed to tar flakes from damaged Iranian oil wells. Releases (since 2/83) of 4000 bbl/d of crude oil with high levels of Ni and V caused kills. Specimens collected 4/83. Saudi Arabia, Arabian Gulf; Iran, Nowruz oil field AAS

MUSCLES; LIVER; TURTLES; SNAKES; AQUATIC; ENVIRONMENTAL EXPOSURE; SAUDI ARABIA; NICKEL; VANADIUM; ANIMAL POPULATIONS; BIOACCUMULATION; FISHES; FOOD CONTAMINATION; WATER POLLUTION; GASTROINTESTINAL SYSTEM

Sadiq, M.; Zaidi, T.H. 1984 Bulletin of Environmental Contamination and Toxicology 32:635-639

Snakes, sea

Tissue	Cases Exposure Route	Range	Mean	General Information
5251 Liver	7	1.0-8.64 ug/g Wet wt	3.94+/-2.06 ug/g Wet wt	Exposed to tar flakes from damaged Iranian oil wells. Releases (since 2/83) of 4000 bbl/d of crude oil with high levels of Ni and V caused kills. Specimens collected 4/83. Saudi Arabia, Arabian Gulf; Iran, Nowruz oil field AAS
5252 Muscle	7	0.93-2.36 ug/g Wet wt	1.52+/-0.60 ug/g Wet wt	Exposed to tar flakes from damaged Iranian oil wells. Releases (since 2/83) of 4000 bbl/d of crude oil with high levels of Ni and V caused kills. Specimens collected 4/83. Saudi Arabia, Arabian Gulf; Iran, Nowruz oil field AAS

MUSCLES; LIVER; TURTLES; SNAKES; AQUATIC; ENVIRONMENTAL EXPOSURE; SAUDI ARABIA; NICKEL; VANADIUM; ANIMAL POPULATIONS; BIOACCUMULATION; FISHES; FOOD CONTAMINATION; WATER POLLUTION; GASTROINTESTINAL SYSTEM

Sadiq, M.; Zaidi, T.H. 1984 Bulletin of Environmental Contamination and Toxicology 32:635-639

Vanadium
7440-62-2
V
AtW 50.9414, MP 1917 C, BP 3000 C, VP 1 mm Hg at 2290 C, 10 mm Hg at 2570 C
Turtle, hawksbill

Tissue	Cases Exposure Route	Range	Mean	General Information
5253 Liver	1	Not applicable	6.50 ug/g Wet wt	Exposed to tar flakes from damaged Iranian oil wells. Releases (since 2/83) of 4000 bbl/d of crude oil with high levels of Ni and V caused kills. Specimens collected 4/83. Saudi Arabia, Arabian Gulf; Iran, Nowruz oil field AAS
MUSCLES; LIVER; TURTLES; SNAKES; AQUATIC; ENVIRONMENTAL EXPOSURE; SAUDI ARABIA; NICKEL; VANADIUM; ANIMAL POPULATIONS; BIOACCUMULATION; FISHES; FOOD CONTAMINATION; WATER POLLUTION; GASTROINTESTINAL SYSTEM Sadiq, M.; Zaidi, T.H. 1984 Bulletin of Environmental Contamination and Toxicology 32:635-639				

Vitamin A
11103-57-4
EXACT COMPOSITION UNKNOWN OR UNDETERMINED
Goat
CAPRA sp.

Tissue	Cases Exposure Route	Range	Mean	General Information
5254 Blood, plasma	2 Ingestion	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given g) Not given h) Not given i) Not given j) Not given k) Not given	a) 47.80 ug/dl b) 50.42 ug/dl c) 64.73 ug/dl d) 58.33 ug/dl e) 47.94 ug/dl f) 32.86 ug/dl g) 72.91 ug/dl h) 27.27 ug/dl i) 35.90 ug/dl j) 34.85 ug/dl k) 42.45 ug/dl	a) 0 hr b) 6 hr c) 18 hr d) 24 hr e) 2 days f) 3 days g) 4 days h) 6 days i) 8 days j) 12 days k) 15 days Times after 10 I.U. retinyl acetate/g body wt and 2 uCi H3-retinyl acetate/100 g body wt Lactating goats, wt 28-30 kg Radiometry
GOATS; INDIA; BLOOD PLASMA; MILK; VITAMIN A; BIOACCUMULATION Sharma, Y.K.; Goyal, K.C.; Misra, U.K. 1983 Nutrition Reports International 28(3):593-596				

Vitamin A
11103-57-4
EXACT COMPOSITION UNKNOWN OR UNDETERMINED

Goat
CAPRA sp.

Tissue	Cases Exposure Route	Range	Mean	General Information
5255 Milk	21 Ingestion	a) 35-20 ug/dl b) 20-15 ug/dl c) 20-30 ug/dl d) 15-30 ug/dl e) 20-20 ug/dl f) 25-25 ug/dl g) 50-50 ug/dl	a) Not applicable b) Not applicable c) Not applicable d) Not applicable e) Not applicable f) Not applicable g) Not applicable	a) 0.25-14 d, peak (230 ug/dl) 4 d after 19.8 mg/kg beta-carotene b) 0.25-14 d, peak (30 ug/dl) 6 d after 4.95 mg/kg/d beta-carotene for 4 d c) 0.25-14 d, peak (45 ug/dl) 1 d after 39.6 mg/kg 8'-apo-beta-carotenal d) 0.25-14 d, peak (48 ug/dl) 4 d after 9.9 mg/kg/d 8'-apo-beta-carotenal for 4 d e) 0.25-14 d, peaks (70 ug/dl and 48 ug/dl) 0.5 and 2 d after 39.6 mg/kg carotenoids f) 0.25-14 d, peaks (48 ug/dl and 40 ug/dl) 7 and 10 d after 9.9 mg/kg/d carotenoids for 4 d g) 0.25-14 d, peak (500 ug/dl) 4 d after 39.6 mg/kg/d carotenoids for 4 d 3 cases/study. Giving precursors increased levels. Estimated from graph. India

MILK; DELIBERATE EXPOSURE; ADULTS; GOATS; INDIA; VITAMIN A; CAROTENOIDS; VITAMINS; BIOACCUMULATION; ANIMAL FEEDS; FOOD ADDITIVES; LACTATION; TERRESTRIAL

Goyal, K.C.; Sharma, Y.K.; Misra, U.K. 1984 Nutrition Reports International 29(2):397-404

Tissue	Cases Exposure Route	Range	Mean	General Information
5256 Milk	2 Ingestion	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given g) Not given	a) 70 ug/dl b) 90 ug/dl c) 45 ug/dl d) 50 ug/dl e) 35 ug/dl f) 30 ug/dl g) 35 ug/dl Estimated from graph	a) 1 day b) 2 days c) 3 days d) 4 days e) 8 days f) 10 days g) 12 days Times after 10 I.U. retinyl acetate/g body wt and 2 uCi H3-retinyl acetate/ g body wt Lactating goats, wt 28-30 kg Radiometry

GOATS; INDIA; BLOOD PLASMA; MILK; VITAMIN A; BIOACCUMULATION

Sharma, Y.K.; Goyal, K.C.; Misra, U.K. 1983 Nutrition Reports International 28(3):593-596

Sheep
OVIS sp.

Tissue	Cases Exposure Route	Range	Mean	General Information
5257 Blood, plasma	16 Injection	a) Not given b) Not given	a) 12.0+/-1.2 ug/dl b) 17.0+/-0.8 ug/dl	a) 120 ug/kg, 4 cases b) 12,000 ug/kg, 12 cases Fetal steady-state after ewe was given indicated dose daily for 55 d. Fluorimetry

BLOOD PLASMA; DELIBERATE EXPOSURE; FETUS; ADULTS; SHEEP; VITAMINS; VITAMIN A; BIOACCUMULATION; RADIONUCLIDES; DRUGS; DRUG THERAPY

Donoghue, S.; Richardson, D.W.; Kronfeld, D.S.; Shlan, D. 1984 Canadian Journal of Animal Science 64:255-256

Zinc
7440-66-6
Zn
AtW 65.38, MP 419.5 C, BP 908 C, VP 1 mm Hg at 487 C, 10 mm Hg at 590 C

Bass, rock
AMBLOPLITES RUPESTRIS

Tissue	Cases Exposure Route	Range	Mean	General Information
5258 Body	14	38-106 ug/g Dry wt	61 ug/g Dry wt Median	Highway-contaminated stream. No positive correlation with total length. Sediment association influenced inter-specific variation. Virginia, Back Creek AAS

BODY; AQUATIC; VIRGINIA; CADMIUM; LEAD; NICKEL; ZINC; METALS; AIR POLLUTION; WATER POLLUTION; BIOACCUMULATION; BIOLOGICAL MONITORING; FISHES; BONES

Ney, J.J.; Van Hassel, J.H. 1983 Archives of Environmental Contamination and Toxicology 12:701-706

Beaver
CASTOR CANADENSIS

Tissue	Cases Exposure Route	Range	Mean	General Information
5259 Intestine	4 Ingestion	Not given	12.8+/-3.5 ug/g	Undisturbed watershed. Specimens from fur trapper. Canada, Ontario, Georgian Bay, Tadenac Lake ES
5260 Kidney	4 Ingestion	Not given	25.4+/-2.0 ug/g	Undisturbed watershed. Specimens from fur trapper. Canada, Ontario, Georgian Bay, Tadenac Lake ES
5261 Liver	4 Ingestion	Not given	29.6+/-4.5 ug/g	Undisturbed watershed. Specimens from fur trapper. Canada, Ontario, Georgian Bay, Tadenac Lake ES
5262 Muscle	4 Ingestion	Not given	54.9+/-32.0 ug/g	Undisturbed watershed. Specimens from fur trapper. Canada, Ontario, Georgian Bay, Tadenac Lake ES

BEAVERS; OTTERS; RACCOONS; CANADA; BIOACCUMULATION; BIOMAGNIFICATION; SELENIUM; IRON; COPPER; CADMIUM; CALCIUM; ALUMINUM; MAGNESIUM; MANGANESE; SODIUM; NICKEL; PHOSPHORUS; ZINC; POTASSIUM; DETOXIFICATION; DIETS; LIVER; KIDNEYS; INTESTINES; MUSCLES; AQUATIC; TERRESTRIAL; ENVIRONMENTAL EXPOSURE; BIOLOGICAL MONITORING

Wren, C.D. 1984 Science of the Total Environment 34:177-184

Zinc
7440-66-6
Zn
AtW 65.38, MP 419.5 C, BP 908 C, VP 1 mm Hg at 487 C, 10 mm Hg at 590 C

Buffalo, water
BOS sp.

Tissue	Cases Exposure Route	Range	Mean	General Information
5263 Lung	Inhalation	a) Not given b) Not given	a) 13,311+/-2010 mg/kg b) 20,506+/-3137 mg/kg	a) Orissa area b) West Bengal area Polluted industrial and mining areas. Controls from non-industrial regions had no gross pulmonary changes, no data given. Necropsies on food animals. India Lungs were dirty pink color mottled with black. 20 trace metals present. Location of particulates suggested paralysed clearance mechanisms. Aggregates of lymphocytes and dust-laden macrophages. X-ray floures

CATTLE; ENVIRONMENTAL EXPOSURE; AIR POLLUTION; INDUSTRIAL POLLUTION; TERRESTRIAL; MERCURY; IRON; ZINC; LEAD; LUNGS; INDIA; AUTOPSIES; FOOD CONTAMINATION; BIOLOGICAL MONITORING; COPPER; BIOINDICATORS; DUST; INHALATION

Dogra, R.K.S.; Shanker, R.; Saxena, A.K.; Khanna, S.; Srivastava, S.N.; Shukla, L.J.; Zaidi, S.H. 1984 Environmental Pollution (Series A) 36:109-120

Bufflehead
BUCEPHALA ALBEOLA

Tissue	Cases Exposure Route	Range	Mean	General Information
5264 Bone	18 Ingestion	101-243 ug/g Dry wt	175 ug/g Dry wt	Collected winters of 1976-77, 1979-80. Extensive interspecies variations. Chesapeake Bay AAS
5265 Kidney	17 Ingestion	22-136 ug/g Dry wt	83 ug/g Dry wt	Collected winters of 1976-77, 1979-80. Extensive interspecies variations. Chesapeake Bay AAS
5266 Liver	71 Ingestion	37-203 ug/g Dry wt	116 ug/g Dry wt	Collected winters of 1976-77, 1979-80. Extensive interspecies variations. Chesapeake Bay AAS

AQUATIC; CADMIUM; LEAD; COPPER; ZINC; LIVER; KIDNEYS; BONES; BIOLOGICAL MONITORING; UNITED STATES; BIOACCUMULATION; BIRDS; TERRESTRIAL; WATERFOWL; DUCKS; ENVIRONMENTAL EXPOSURE; DIETS; METALS

Giulio, R.T.; Scanlon, P.F. 1984 Environmental Pollution (Series A) 35:29-48

Zinc
7440-66-6
Zn
AtW 65.38, MP 419.5 C, BP 908 C, VP 1 mm Hg at 487 C, 10 mm Hg at 590 C

Caddisfly
TRICHOPTERA

Tissue	Cases Exposure Route	Range	Mean	General Information
5267 Body		a) 550-620 ppm b) 500-550 ppm c) 0-400 ppm d) 400-3600 ppm e) 600-1100 ppm	a) Not given b) Not given c) Not given d) Not given e) Not given	a) Controls during dry weather b) Controls during rain, only c) Station 2, which drains half of business district, during dry weather d) Station 2, which drains half of business district during rain e) Station 3, which receives total cumulative runoff from the city, during dry weather Additional data for Station 1, a control with an artificial substrate, and three weather regimes: dry, rain and snow/thaw (wet=rain and snow/thaw) Estimated from graph Massachusetts, Greenfield, Green River AAS
URBAN AREAS; WATER POLLUTION; BIOINDICATORS; COPPER; CADMIUM; ZINC; LEAD; INSECTS; AQUATIC; BENTHOS; BODY; MASSACHUSETTS; ENVIRONMENTAL EXPOSURE Medeiros, C.; LeBlanc, R.; Coler, R.A. 1983 Environmental Toxicology and Chemistry 2:119-126				

Canvasback
AYTHYA VALISINERIA

Tissue	Cases Exposure Route	Range	Mean	General Information
5268 Bone	64 Ingestion	108-222 ug/g Dry wt	157 ug/g Dry wt	Collected winters of 1976-77, 1979-80. Extensive interspecies variations. Chesapeake Bay AAS
5269 Kidney	64 Ingestion	50-199 ug/g Dry wt	103 ug/g Dry wt	Collected winters of 1976-77, 1979-80. Extensive interspecies variations. Chesapeake Bay AAS
5270 Liver	64 Ingestion	66-315 ug/g Dry wt	170 ug/g Dry wt	Collected winters of 1976-77, 1979-80. Extensive interspecies variations. Chesapeake Bay AAS
AQUATIC; CADMIUM; LEAD; COPPER; ZINC; LIVER; KIDNEYS; BONES; BIOLOGICAL MONITORING; UNITED STATES; BIOACCUMULATION; BIRDS; TERRESTRIAL; WATERFOWL; DUCKS; ENVIRONMENTAL EXPOSURE; DIETS; METALS Giulio, R.T.; Scanlon, P.F. 1984 Environmental Pollution (Series A) 35:29-48				

Zinc
7440-66-6
Zn
AtW 65.38, MP 419.5 C, BP 908 C, VP 1 mm Hg at 487 C, 10 mm Hg at 590 C
Cattle
BOS sp.

Tissue	Cases Exposure Route	Range	Mean	General Information
5271 Blood	a) 8 b) 8 c) 8 Ingestion	a) 275-310 ug/100 ml b) 280-310 ug/100 ml c) 340-425 ug/100 ml	a) Not given b) Not given c) Not given	a) Fed rations with 41.5-52.9 ug Cd, 7.00-7.44 ug Cu and 54-59 ug Zn/g feed for 60 d b) Same amount of Cd and Cu and 254-265 ug Zn/g feed c) Same amount of Cd and Cu and 641-709 ug Zn/g feed 6-9 mo old calves, mean wt 184 kg. Range of means. Levels declined in a) and b) but increased by approximately 1.3 in c). Estimated from graph. AAS

BLOOD; MUSCLES; KIDNEYS; LIVER; CATTLE; TERRESTRIAL; DELIBERATE EXPOSURE; COMPARATIVE EVALUATIONS; CADMIUM; ZINC; COPPER; METALS; ANIMAL FEEDS; DIETS; JUVENILES
Lamphere, D.N.; Dorn, C.R.; Reddy, C.S.; Meyer, A.W. 1984 Environmental Research 33:119-129

Tissue	Cases Exposure Route	Range	Mean	General Information
5272 Brain	a) 3 b) 4 c) 4 d) 3 e) 4 Ingestion	a) Not given b) Not given c) Not given d) Not given e) Not given	a) 41.5 ug/kg b) 46.5 ug/kg c) 56.0 ug/kg d) 46.6 ug/kg e) 45.7 ug/kg Dry wt	a) Controls, 0 mg Pb/kg b) 6.25 mg Pb/kg c) 7.81 mg Pb/kg d) 9.77 mg Pb/kg e) 12.21 mg Pb/kg Daily dietary doses. 2 in c) survived 89 and 112 d, others, except controls, died within 24 d. Diarrhea Blindness, death AAS

LIVER; KIDNEYS; SPLEEN; HEART; BRAIN; DELIBERATE EXPOSURE; ADULTS; CATTLE; METAL POISONING; AUTOPSIES; COPPER; LEAD; MANGANESE; IRON; ZINC; METALS; AGRICULTURE; BIOACCUMULATION; DIETS; ANIMAL FEEDS; TERRESTRIAL
Doyle, J.J.; Younger, R.L. 1984 Veterinary and Human Toxicology 26(3):201-204

Tissue	Cases Exposure Route	Range	Mean	General Information
5273 Hair	Ingestion	Not given	64 ppm	Data from one representative site. Deposition of elements on pasture. Collected Oct-Nov 1981-2. 5 yr old cows, 10 samples/farm, 9-14 farms, 7-12 sites. Deposition poorly correlated with essential elements, hair levels nearly constant. Belgium NA

CATTLE; HAIR; BIOLOGICAL MONITORING; AIR POLLUTION; LAND POLLUTION; ARSENIC; BARIUM; BROMINE; CERIUM; COBALT; CHROMIUM; CESIUM; IRON; POTASSIUM; LANTHANUM; SODIUM; RUBIDIUM; ANTIMONY; SCANDIUM; SELENIUM; SAMARIUM; THORIUM; ZINC; FOOD CONTAMINATION; BIOACCUMULATION; BIOCONCENTRATION; TERRESTRIAL; ENVIRONMENTAL EXPOSURE; TRACE ELEMENTS
Ronneau, C.; Cara, J. 1984 Science of the Total Environment 39:135-142

Zinc
7440-66-6
Zn
AtW 65.38, MP 419.5 C, BP 908 C, VP 1 mm Hg at 487 C, 10 mm Hg at 590 C

Cattle
BOS sp.

Tissue	Cases Exposure Route	Range	Mean	General Information
5274 Heart	a) 3 b) 4 c) 4 d) 3 e) 4 Ingestion	a) Not given b) Not given c) Not given d) Not given e) Not given	a) 69.5 ug/g b) 58.7 ug/g c) 73.0 ug/g d) 78.6 ug/g e) 67.0 ug/g Dry wt	a) Controls, 0 mg Pb/kg b) 6.25 mg Pb/kg c) 7.81 mg Pb/kg d) 9.77 mg Pb/kg e) 12.21 mg Pb/kg Daily dietary doses. 2 in c) survived 89 and 112 d, others, except controls, died within 24 d. Diarrhea Blindness, death AAS

LIVER; KIDNEYS; SPLEEN; HEART; BRAIN; DELIBERATE EXPOSURE; ADULTS; CATTLE; METAL POISONING; AUTOPSIES; COPPER; LEAD; MANGANESE; IRON; ZINC; METALS; AGRICULTURE; BIOACCUMULATION; DIETS; ANIMAL FEEDS; TERRESTRIAL

Doyle, J.J.; Younger, R.L. 1984 Veterinary and Human Toxicology 26(3):201-204

Tissue	Cases Exposure Route	Range	Mean	General Information
5275 Kidney	a) 8 b) 8 c) 8 d) 8 Ingestion	a) Not given b) Not given c) Not given d) Not given	a) 24.5+/-0.8 ug/g b) 36.0+/-2.4 ug/g c) 39.6+/-2.1 ug/g d) 140.8+/-23.1 ug/g Wet wt S.E.	a) Baseline - calves, fed hay and water b) Fed rations with 41.5-52.9 ug Cd, 7.00-7.44 ug Cu and 54-59 ug Zn/g feed for 60 d c) Same amount of Cd and Cu and 254-265 ug Zn/g feed d) Same amount of Cd and Cu and 641-709 ug Zn/g feed 6-9 mo old calves, mean wt 184 kg. Significant difference b), d) and c), d) ($p<0.01$). Inverse dose repsonse between kidney level and amount of Zn in feed. AAS

BLOOD; MUSCLES; KIDNEYS; LIVER; CATTLE; TERRESTRIAL; DELIBERATE EXPOSURE; COMPARATIVE EVALUATIONS; CADMIUM; ZINC; COPPER; METALS; ANIMAL FEEDS; DIETS; JUVENILES

Lamphere, D.N.; Dorn, C.R.; Reddy, C.S.; Meyer, A.W. 1984 Environmental Research 33:119-129

Tissue	Cases Exposure Route	Range	Mean	General Information
5276 Kidney	178	16.2-60.9 mg/kg Wet wt	25.1 +or- 6.3 mg/kg Wet wt	From abattoirs in 10 selected 100-sq km areas representing a cross-section of industries. Australia, Queensland AAS

CATTLE; AUSTRALIA; KIDNEYS; LIVER; MUSCLES ; ARSENIC; CADMIUM; CHROMIUM; COPPER; LEAD; MERCURY; SELENIUM; ZINC; BIOACCUMULATION; INDUSTRIAL AREAS

Kramer, H.L.; Steiner, J.W.; Vallely, P.J. 1983 Bulletin of Environmental Contamination and Toxicology 30:588-594

Zinc
7440-66-6
Zn
AtW 65.38, MP 419.5 C, BP 908 C, VP 1 mm Hg at 487 C, 10 mm Hg at 590 C

Cattle
BOS sp.

Tissue	Cases Exposure Route	Range	Mean	General Information
5277 Kidney	a) 3 b) 4 c) 4 d) 3 e) 4 Ingestion	a) Not given b) Not given c) Not given d) Not given e) Not given	a) 82.2 ug/kg b) 84.7 ug/kg c) 122.1 ug/kg d) 85.7 ug/kg e) 82.9 ug/kg Dry wt	a) Controls, 0 mg Pb/kg b) 6.25 mg Pb/kg c) 7.81 mg Pb/kg d) 9.77 mg Pb/kg e) 12.21 mg Pb/kg Daily dietary doses. 2 in c) survived 89 and 112 d, others, except controls, died within 24 d. Diarrhea Blindness, death AAS

LIVER; KIDNEYS; SPLEEN; HEART; BRAIN; DELIBERATE EXPOSURE; ADULTS; CATTLE; METAL POISONING; AUTOPSIES; COPPER; LEAD; MANGANESE; IRON; ZINC; METALS; AGRICULTURE; BIOACCUMULATION; DIETS; ANIMAL FEEDS; TERRESTRIAL

Doyle, J.J.; Younger, R.L. 1984 Veterinary and Human Toxicology 26(3):201-204

Tissue	Cases Exposure Route	Range	Mean	General Information
5278 Liver	a) 8 b) 8 c) 8 d) 8 Ingestion	c) Not given b) Not given c) Not given d) Not given	a) 50.2+/-5.0 ug/g b) 41.5+/-2.3 ug/g c) 50.3+/-4.9 ug/g d) 163.9+/-21.9 ug/g Wet wt S.E.	a) Baseline - calves, fed hay and water b) Fed rations with 41.5-52.9 ug Cd, 7.00-7.44 ug Cu and 54-59 ug Zn/g feed for 60 d c) Same amount of Cd and Cu and 254-265 ug Zn/g feed d) Same amount of Cd and Cu and 641-709 ug Zn/g feed 6-9 mo old calves, mean wt 184 kg. Significant difference b), d) and c), d) ($p < 0.01$) AAS

BLOOD; MUSCLES; KIDNEYS; LIVER; CATTLE; TERRESTRIAL; DELIBERATE EXPOSURE; COMPARATIVE EVALUATIONS; CADMIUM; ZINC; COPPER; METALS; ANIMAL FEEDS; DIETS; JUVENILES

Lamphere, D.N.; Dorn, C.R.; Reddy, C.S.; Meyer, A.W. 1984 Environmental Research 33:119-129

Tissue	Cases Exposure Route	Range	Mean	General Information
5279 Liver	180	14.3-125.6 mg/kg Wet wt	50.9 +or- 17.3 mg/kg Wet wt	From abattoirs in 10 selected 100-sq km areas representing a cross-section of industries. Australia, Queensland AAS

CATTLE; AUSTRALIA; KIDNEYS; LIVER; MUSCLES ; ARSENIC; CADMIUM; CHROMIUM; COPPER; LEAD; MERCURY; SELENIUM; ZINC; BIOACCUMULATION; INDUSTRIAL AREAS

Kramer, H.L.; Steiner, J.W.; Vallely, P.J. 1983 Bulletin of Environmental Contamination and Toxicology 30:588-594

Zinc
7440-66-6
Zn
AtW 65.38, MP 419.5 C, BP 908 C, VP 1 mm Hg at 487 C, 10 mm Hg at 590 C

Cattle
BOS sp.

Tissue	Cases Exposure Route	Range	Mean	General Information
5280 Liver	a) 5 b) 4 c) 4 d) 3 e) 4 Ingestion	a) Not given b) Not given c) Not given d) Not given e) Not given	a) 102.2 ug/g b) 136.9 ug/g c) 124.9 ug/g d) 124.8 ug/g e) 134.8 ug/g Dry wt	a) Controls, 0 mg Pb/kg b) 6.25 mg Pb/kg c) 7.81 mg Pb/kg d) 9.77 mg Pb/kg e) 12.21 mg Pb/kg Daily dietary doses. 2 in c) survived 89 and 112 d, others, except controls, died within 24 d. Diarrhea Blindness, death AAS
LIVER; KIDNEYS; SPLEEN; HEART; BRAIN; DELIBERATE EXPOSURE; ADULTS; CATTLE; METAL POISONING; AUTOPSIES; COPPER; LEAD; MANGANESE; IRON; ZINC; METALS; AGRICULTURE; BIOACCUMULATION; DIETS; ANIMAL FEEDS; TERRESTRIAL				
Doyle, J.J.; Younger, R.L. 1984 Veterinary and Human Toxicology 26(3):201-204				

Tissue	Cases Exposure Route	Range	Mean	General Information
5281 Milk		Not given	3.5 mg/L	Normal cow's milk used in bioavailability study with humans. Sweden AAS
DIETS; CATTLE; ZINC; CALCIUM; MILK; ENVIRONMENTAL EXPOSURE; DELIBERATE EXPOSURE; TERRESTRIAL				
Lonnerdal, B.; Cederblad, A.; Davidson, L.; Sandstrom, B. 1984 American Journal of Clinical Nutrition 40:1064-1070				

Tissue	Cases Exposure Route	Range	Mean	General Information
5282 Muscle	a) 8 b) 8 c) 8 d) 8 Ingestion	a) Not given b) Not given c) Not given d) Not given	a) 55.3+/-4.1 ug b) 52.5+/-2.0 ug c) 52.6+/-2.5 ug d) 50.9+/-4.5 ug /g wet wt S.E.	a) Baseline - calves, fed hay and water b) Fed rations with 41.5-52.9 ug Cd, 7.00-7.44 ug Cu and 54-59 ug Zn/g feed for 60 d c) Same amount of Cd and Cu and 254-265 ug Zn/g feed d) Same amount of Cd and Cu and 641-709 ug Zn/g feed 6-9 mo old calves, mean wt 184 kg. No Significant difference. AAS
BLOOD; MUSCLES; KIDNEYS; LIVER; CATTLE; TERRESTRIAL; DELIBERATE EXPOSURE; COMPARATIVE EVALUATIONS; CADMIUM; ZINC; COPPER; METALS; ANIMAL FEEDS; DIETS; JUVENILES				
Lamphere, D.N.; Dorn, C.R.; Reddy, C.S.; Meyer, A.W. 1984 Environmental Research 33:119-129				

Zinc
7440-66-6
Zn
AtW 65.38, MP 419.5 C, BP 908 C, VP 1 mm Hg at 487 C, 10 mm Hg at 590 C

Cattle
BOS sp.

Tissue	Cases Exposure Route	Range	Mean	General Information
5288 Muscle	181	16.1-106.7 mg/kg Wet wt	61.9 +or- 13.0 mg/kg Wet wt	From abattoirs in 10 selected 100-sq km areas representing a cross-section of industries. Australia, Queensland AAS
CATTLE; AUSTRALIA; KIDNEYS; LIVER; MUSCLES ; ARSENIC; CADMIUM; CHROMIUM; COPPER; LEAD; MERCURY; SELENIUM; ZINC; BIOACCUMULATION; INDUSTRIAL AREAS Kramer, H.L.; Steiner, J.W.; Vallely, P.J. 1983 Bulletin of Environmental Contamination and Toxicology 30:588-594				

Tissue	Cases Exposure Route	Range	Mean	General Information
5384 Spleen	a) 3 b) 4 c) 4 d) 3 e) 4 Ingestion	a) Not given b) Not given c) Not given d) Not given e) Not given	a) 68.8 ug/g b) 78.2 ug/g c) 78.8 ug/g d) 86.5 ug/g e) 90.8 ug/g Dry wt	a) Controls, 0 mg Pb/kg b) 6.28 mg Pb/kg c) 7.81 mg Pb/kg d) 9.77 mg Pb/kg e) 12.21 mg Pb/kg Daily dietary doses. 2 in c) survived 89 and 112 d, others, except controls, died within 24 d. Diarrhea Blindness, death AAS
LIVER; KIDNEYS; SPLEEN; HEART; BRAIN; DELIBERATE EXPOSURE; ADULTS; CATTLE; METAL POISONING; AUTOPSIES; COPPER; LEAD; MANGANESE; IRON; ZINC; METALS; AGRICULTURE; BIOACCUMULATION; DIETS; ANIMAL FEEDS; TERRESTRIAL Doyle, J.J.; Younger, R.L. 1984 Veterinary and Human Toxicology 26(3):201-204				

Clam
DONAX SERRA

Tissue	Cases Exposure Route	Range	Mean	General Information
5385 Body	251	10.9-19.3 ug/g Wet wt	Not applicable	Collected 8/78-8/79 for national marine pollution monitoring program. Range of means. South Africa
BODY; AQUATIC; ENVIRONMENTAL EXPOSURE; SOUTH AFRICA; METALS; ZINC; CADMIUM; COPPER; LEAD; IRON; MANGANESE; NICKEL; COBALT; CHROMIUM; BIOINDICATORS; BIOLOGICAL MONITORING; BIOACCUMULATION; WATER POLLUTION; MOLLUSKS Watling, H.R.; Watling, R.J. 1983 Bulletin of Environmental Contamination and Toxicology 31:331-338				

Zinc
7440-66-6
Zn
AtW 65.38, MP 419.5 C, BP 908 C, VP 1 mm Hg at 487 C, 10 mm Hg at 590 C

Clam, Asiatic
CORBICULA MANILENSIS

Tissue	Cases Exposure Route	Range	Mean	General Information
5286 Body, whole	9	2.1-36 ug/g Dry wt	20 ug/g Dry wt Median	August 1979-May 1980, sampling dates. More concentrated in sediments than in tissue. No correlation between sediment and clam residues. Non point sources. No significant seasonal, temporal or spatial variability reported. Florida, Apalachicola River AAS

BODY; ASIATIC CLAM; AQUATIC; ENVIRONMENTAL EXPOSURE; FLORIDA; TRACE ELEMENTS; PESTICIDES; POLYCHLORINATED BIPHENYLS; CHROMIUM; COPPER; LEAD; MANGANESE; MERCURY; ZINC; DDD; ORGANOPHOSPHATES; DDE; DDT; DIELDRIN; HEPTACHLOR EPOXIDE; INSECTICIDES; GEOLOGY

Elder, J.F.; Mattraw, H.C. 1984 Archives of Environmental Contamination and Toxicology 13:453-469

Clam, hard-shell
MERCINARIA MERCINARIA

Tissue	Cases Exposure Route	Range	Mean	General Information
5387 Body	a) 13 b) 10 c) 18 d) 128 e) 38 Ingestion	a) 11.4-33.3 ug/g b) 7.9-25.9 ug/g c) 18.0-38.4 ug/g d) 7.5-83.6 ug/g e) 7.1-31.7 ug/g Wet wt	a) 20.5 ug/g b) 18.3 ug/g c) 22.8 ug/g d) 19.5 ug/g e) 17.2 ug/g Wet wt	a) 1976 b) 1977 c) 1978 d) 1979 e) 1980 Data include soft-shell clam, MYA ARENARIA. Biological monitoring for heavy metals in shellfish 1976-1980. Residues were well below safe levels. No significant yearly trends. Maryland, Chesapeake Bay area, tributaries AAS

CLAMS; BLUE CRABS; SHELLFISH; CHESAPEAKE BAY; MARYLAND; BIOLOGICAL MONITORING; BIOCONCENTRATION; COPPER; ZINC; LEAD; CADMIUM; ARSENIC; MERCURY; CHROMIUM; WATER POLLUTION; FOOD CONTAMINATION; AQUATIC; MOLLUSKS; ENVIRONMENTAL EXPOSURE

Eisenberg, M.; Topping, J.J. 1984 Journal of Environmental Science and Health B19(7):649-671

Zinc

7440-66-6
Zn
AtW 65.38, MP 419.5 C, BP 908 C, VP 1 mm Hg at 487 C, 10 mm Hg at 590 C

Clam, soft-shell
MYA ARENARIA

Tissue	Cases Exposure Route	Range	Mean	General Information
5288 Body	a) 15 b) 10 c) 18 d) 123 e) 88 Ingestion	a) 11.4-88.3 ug/g b) 7.9-26.9 ug/g c) 13.0-38.4 ug/g d) 7.5-38.6 ug/g e) 7.1-31.7 ug/g Wet wt	a) 20.5 ug/g b) 18.3 ug/g c) 22.8 ug/g d) 19.5 ug/g e) 17.2 ug/g Wet wt	a) 1976 b) 1977 c) 1978 d) 1979 e) 1980 Data include hard-shell clam, MERCENARIA MERCENARIA. Biological monitoring for heavy metals in shellfish 1976-1980. Residues were well below safe levels. No significant yearly trends. Increases in As merit future study. Chesapeake Bay and tributaries. Maryland, Chesapeake Bay area AAS
CLAMS; BLUE CRABS; SHELLFISH; CHESAPEAKE BAY; MARYLAND; BIOLOGICAL MONITORING; BIOCONCENTRATION; COPPER; ZINC; LEAD; CADMIUM; ARSENIC; MERCURY; CHROMIUM; WATER POLLUTION; FOOD CONTAMINATION; AQUATIC; MOLLUSKS; ENVIRONMENTAL EXPOSURE Eisenberg, M.; Topping, J.J. 1984 Journal of Environmental Science and Health B19(7):649-671				

Tissue	Cases Exposure Route	Range	Mean	General Information
5289 Muscle	110	Not given	10.7+/-3.8 ug/g Wet wt	Total soft tissues. Collected 1970-74 Oregon, coast AAS
CRUSTACEANS; HEPATOPANCREAS; MOLLUSKS; OREGON ; MUSCLES; BIOACCUMULATION; WATER POLLUTION; CADMIUM; COPPER; IRON; MANGANESE; MERCURY; ZINC Caldwell, R.S.; Buhler, D.R. 1983 Archives of Environmental Contamination and Toxicology 12:15-23				

Cockle
CLINOCARDIUM NUTTALLII

Tissue	Cases Exposure Route	Range	Mean	General Information
5290 Muscle	62	Not given	10.0 +or- 2.42 ug/g Wet wt	Total soft tissues. Collected 1970-74 Oregon, coast AAS
CRUSTACEANS; HEPATOPANCREAS; MOLLUSKS; OREGON ; MUSCLES; BIOACCUMULATION; WATER POLLUTION; CADMIUM; COPPER; IRON; MANGANESE; MERCURY; ZINC Caldwell, R.S.; Buhler, D.R. 1983 Archives of Environmental Contamination and Toxicology 12:15-23				

Zinc
7440-66-6
Zn
AtW 65.38, MP 419.5 C, BP 908 C, VP 1 mm Hg at 487 C, 10 mm Hg at 590 C

Cod, Pacific
GADUS MACROCEPHALUS

Tissue	Cases Exposure Route	Range	Mean	General Information
5291 Muscle	Ingestion	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given	a) 4.160+/-0.492 ug/g b) 3.627+/-0.169 ug/g c) 3.731+/-0.217 ug/g d) 0.401+/-0.040 mg/100 g e) 4.057+/-0.498 ug/g f) 4.555+/-0.486 ug/g Wet wt	a) Near Cape Flattery, WA, 50 fish, mean wt 2628+/-1174 g b) Cape Sarichef, AK, 12 fish, 1148+/-649 g c) Cape Ommaney, AK, 11 fish, 798+/-407 g d) Overall mean, combined sites e) Nape section of fish, 30 fillets f) Tail section of fish, 30 fillets. Slightly higher level in tail indicated differential distribution. Pacific Ocean ES

FISHES; BIOLOGICAL MONITORING; PACIFIC OCEAN; ALUMINUM; BARIUM; CALCIUM; CHROMIUM; COPPER; IRON; MERCURY; POTASSIUM; LITHIUM; MAGNESIUM; MANGANESE; SODIUM; PHOSPHORUS; STRONTIUM; ZINC; AQUATIC; ENVIRONMENTAL EXPOSURE; WATER POLLUTION; FOOD CONTAMINATION; MUSCLES

Teeny, F.M.; Gauglitz, E.J., Jr.; Hall, A.S.; Houle, C.R. 1984 Journal of Agricultural and Food Chemistry 32:852-855

Crab, blue
CALLINECTES SAPIDUS

Tissue	Cases Exposure Route	Range	Mean	General Information
5292 Body	a) 8 b) 20 Ingestion	a) 26.7-45.7 ug/g b) 19.4-33.1 ug/g Wet wt	a) 36.4 ug/g b) 25.7 ug/g Wet wt	a) 1979 b) 1980 None collected 1976-1978. Biological monitoring for heavy metals in shellfish 1976-1980. Residues were well below safe levels. No significant yearly trends. Maryland, Chesapeake Bay area tributaries AAS

CLAMS; BLUE CRABS; SHELLFISH; CHESAPEAKE BAY; MARYLAND; BIOLOGICAL MONITORING; BIOCONCENTRATION; COPPER; ZINC; LEAD; CADMIUM; ARSENIC; MERCURY; CHROMIUM; WATER POLLUTION; FOOD CONTAMINATION; AQUATIC; MOLLUSKS; ENVIRONMENTAL EXPOSURE

Eisenberg, M.; Topping, J.J. 1984 Journal of Environmental Science and Health B19(7):649-671

Crab, Dungeness
CANCER MAGISTER

Tissue	Cases Exposure Route	Range	Mean	General Information
5293 Hepatopancreas	125	Not given	21.2 +or- 8.10 ug/g wet wt	Collected 1970-74 Oregon, coast AAS
5294 Muscle	166	Not given	41.9 +or- 3.35 ug/g wet wt	Collected 1970-74 Oregon, coast AAS

CRUSTACEANS; HEPATOPANCREAS; MOLLUSKS; OREGON ; MUSCLES; BIOACCUMULATION; WATER POLLUTION; CADMIUM; COPPER; IRON; MANGANESE; MERCURY; ZINC

Caldwell, R.S.; Buhler, D.R. 1983 Archives of Environmental Contamination and Toxicology 12:15-23

Zinc
7440-66-6
Zn
AtW 65.38, MP 419.5 C, BP 908 C, VP 1 mm Hg at 487 C, 10 mm Hg at 590 C

Dace, blacknose
RHINICTHYS ATRATULUS

Tissue	Cases Exposure Route	Range	Mean	General Information
5295 Body	19	167-388 ug/g Dry wt	231 ug/g Dry wt Median	Highway-contaminated stream. No positive correlation with total length. Sediment association influenced inter-specific variation. Virginia, Back Creek AAS
BODY; AQUATIC; VIRGINIA; CADMIUM; LEAD; NICKEL; ZINC; METALS; AIR POLLUTION; WATER POLLUTION; BIOACCUMULATION; BIOLOGICAL MONITORING; FISHES; BONES				
Ney, J.J.; Van Hassel, J.H. 1983 Archives of Environmental Contamination and Toxicology 12:701-706				

Darter, fantail
ETHEOSTOMA FLABELLARE

Tissue	Cases Exposure Route	Range	Mean	General Information
5296 Body	19	91-224 ug/g Dry wt	147 ug/g Dry wt	Highway-contaminated stream. No positive correlation with total length. Sediment association influenced inter-specific variation. Virginia, Back Creek AAS
BODY; AQUATIC; VIRGINIA; CADMIUM; LEAD; NICKEL; ZINC; METALS; AIR POLLUTION; WATER POLLUTION; BIOACCUMULATION; BIOLOGICAL MONITORING; FISHES; BONES				
Ney, J.J.; Van Hassel, J.H. 1983 Archives of Environmental Contamination and Toxicology 12:701-706				

Dogfish
SCYLIORHINUS CANICULA

Tissue	Cases Exposure Route	Range	Mean	General Information
5297 Liver	a) 9 b) 8 c) 8	a) Not given b) Not given c) Not given	a) 40 ug/g b) 70 ug/g c) 50 ug/g Dry wt Estimated from graph	a) Controls b) 10 ppm for 3 wk c) 80 ppm for 24 hr Wt 150-300 g No toxic symptoms at 10 ppm, overturning at 80 ppm. AAS
SPAIN; FISHES; BIOACCUMULATION; LIVER; ZINC; COPPER; MANGANESE				
Sanpera, C.; Vallribera, M.; Crespo, S. 1983 Bulletin of Environmental Contamination and Toxicology 31:415-417				

Zinc

7440-66-6

Zn

AtW 65.38, MP 419.5 C, BP 908 C, VP 1 mm Hg at 487 C, 10 mm Hg at 590 C

Dolphin, striped

STENELLA COERULEOALBA

Tissue	Cases Exposure Route	Range	Mean	General Information
5298 Blood	29	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given g) Not given	a) 9.96+/-2.13 ug/g b) 3.24+/-1.09 ug/g c) 4.81+/-1.43 ug/g d) 3.59+/-0.35 ug/g e) 3.75+/-0.25 ug/g f) 3.67+/-0.10 ug/g g) 3.88+/-1.05 ug/g Wet wt	a) Fetus b) Calf, 0-1.75 yr c) Immature, 1.75-7.5 yr d) Immature, 7.5-15 yr e) Mature, 15-25 yr f) Mature, 25-40 yr g) Overall Captured in 1977-1980. Levels changed with age during immaturity, unchanged for mature. Japan, Kawana, east Izu Peninsula; Japan, Taiji, southern Kii Peninsula AAS
5299 Blubber	a) 16 b) 17	a) Not given b) Not given	a) 5.66+/-5.90 ug/g b) 11.6+/-3.60 ug/g Wet wt	a) Calf, immature and mature b) Fetus Collected in 1977-1980. Japan, Kawana, east Izu Peninsula; Japan, Taiji, southern Kii Peninsula AAS
5300 Bone	a) 5 b) 13	a) Not given b) Not given	a) 403+/-84.3 ug/g b) 82.2+/-42.0 ug/g Wet wt	a) Calf, immature and mature b) Fetus Collected in 1977-1980. Japan, Kawana, east Izu Peninsula; Japan, Taiji, southern Kii Peninsula AAS
5301 Brain	29	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given g) Not given	a) 8.32+/-2.69 ug/g b) 13.3+/-0.99 ug/g c) 12.3+/-0.37 ug/g d) 12.4+/-0.63 ug/g e) 12.4+/-0.80 ug/g f) 13.2+/-0.25 ug/g g) 12.6+/-0.82 ug/g Wet wt	a) Fetus b) Calf, 0-1.75 yr c) Immature, 1.75-7.5 yr d) Immature, 7.5-15 yr e) Mature, 15-25 yr f) Mature, 25-40 yr g) Overall Captured in 1977-1980. Levels changed with age during immaturity, unchanged for mature. Japan, Kawana, east Izu Peninsula; Japan, Taiji, southern Kii Peninsula AAS
5302 Diaphragm	a) 15 b) 3	a) Not given b) Not given	a) 44.9+/-4.07 ug/g b) 29.0+/-3.22 ug/g Wet wt	a) Calf, immature and mature b) Fetus Collected in 1977-1980. Japan, Kawana, east Izu Peninsula; Japan, Taiji, southern Kii Peninsula AAS
5303 Heart	a) 15 b) 4	a) Not given b) Not given	a) 26.1+/-2.75 ug/g b) 24.2+/-2.00 ug/g Wet wt	a) Calf, immature and mature b) Fetus Collected in 1977-1980. Japan, Kawana, east Izu Peninsula; Japan, Taiji, southern Kii Peninsula AAS

(next page)

Zinc
7440-66-6
Zn
AtW 65.38, MP 419.5 C, BP 908 C, VP 1 mm Hg at 487 C, 10 mm Hg at 590 C

Dolphin, striped
STENELLA COERULEOALBA

(continued)

Tissue	Cases Exposure Route	Range	Mean	General Information
5304 Intestine	a) 15 b) 3	a) Not given b) Not given	a) 21.1+/-1.97 ug/g b) 20.4+/-0.59 ug/g Wet wt	a) Calf, immature and mature b) Fetus Collected in 1977-1980. Japan, Kawana, east Izu Peninsula; Japan, Taiji, southern Kii Peninsula AAS
5305 Kidney	45	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given g) Not given	a) 17.4+/-3.59 ug/g b) 20.8+/-5.64 ug/g c) 33.4+/-0.99 ug/g d) 28.9+/-3.66 ug/g e) 30.0+/-5.44 ug/g f) 27.8+/-0.80 ug/g g) 30.0+/-4.59 ug/g Wet wt	a) Fetus b) Calf, 0-1.75 yr c) Immature, 1.75-7.5 yr d) Immature, 7.5-15 yr e) Mature, 15-25 yr f) Mature, 25-40 yr g) Overall Captured in 1977-1980. Levels changed with age during immaturity, unchanged for mature. Japan, Kawana, east Izu Peninsula; Japan, Taiji, southern Kii Peninsula AAS
5306 Liver	45	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given g) Not given	a) 37.1+/-10.8 ug/g b) 66.6+/-26.4 ug/g c) 51.3+/-6.01 ug/g d) 41.6+/-4.82 ug/g e) 40.1+/-7.07 ug/g f) 38.6+/-5.08 ug/g g) 43.7+/-14.2 ug/g Wet wt	a) Fetus b) Calf, 0-1.75 yr c) Immature, 1.75-7.5 yr d) Immature, 7.5-15 yr e) Mature, 15-25 yr f) Mature, 25-40 yr g) Overall Captured in 1977-1980. Levels changed with age during immaturity, unchanged for mature. Japan, Kawana, east Izu Peninsula; Japan, Taiji, southern Kii Peninsula AAS
5307 Lung	a) 15 b) 5	a) Not given b) Not given	a) 20.7+/-5.16 ug/g b) 15.9+/-9.82 ug/g Wet wt	a) Calf, immature and mature b) Fetus Collected in 1977-1980. Japan, Kawana, east Izu Peninsula; Japan, Taiji, southern Kii Peninsula AAS
5308 Mammary gland	4	Not given	20.7+/-1.99 ug/g Wet wt	Calves, immatures and mature adults captured in 1977-1980. Japan, Kawana, east Izu Peninsula; Japan, Taiji, southern Kii Peninsula AAS
5309 Milk	10	Not given	11.0+/-3.20 ug/g Wet wt	Calves, immatures and mature adults captured in 1977-1980. Japan, Kawana, east Izu Peninsula; Japan, Taiji, southern Kii Peninsula AAS

(next page)

Zinc
7440-66-6
Zn
AtW 65.38, MP 419.5 C, BP 908 C, VP 1 mm Hg at 487 C, 10 mm Hg at 500 C

Dolphin, striped
STENELLA COERULEOALBA

(continued)

Tissue	Cases Exposure Route	Range	Mean	General Information
5810 Muscle	72	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given g) Not given	a) 19.4+/-8.17 ug/g b) 13.1+/-1.42 ug/g c) 12.7+/-1.66 ug/g d) 10.4+/-2.13 ug/g e) 11.4+/-3.19 ug/g f) 10.5+/-1.53 ug/g g) 11.4+/-2.44 ug/g Wet wt	a) Fetus b) Calf, 0-1.75 yr c) Immature, 1.75-7.5 yr d) Immature, 7.5-15 yr e) Mature, 15-25 yr f) Mature, 25-40 yr g) Overall Captured in 1977-1980. Levels changed with age during immaturity, unchanged for mature. Japan, Kawana, east Izu Peninsula; Japan, Taiji, southern Kii Peninsula AAS
5811 Ovary	a) 3 b) 3	a) Not given b) Not given	a) 20.0+/-0.14 ug/g b) 23.4+/-0.15 ug/g Wet wt	a) Calf, immature and mature b) Fetus Collected in 1977-1980. Japan, Kawana, east Izu Peninsula; Japan, Taiji, southern Kii Peninsula AAS
5812 Pancreas	39	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given g) Not given	a) 17.3+/-4.40 ug/g b) 34.5 ug/g c) 32.4+/-3.50 ug/g d) 22.9+/-4.88 ug/g e) 28.0+/-5.89 ug/g f) 25.0+/-1.00 ug/g g) 27.2+/-5.91 ug/g Wet wt	a) Fetus b) Calf, 0-1.75 yr c) Immature, 1.75-7.5 yr d) Immature, 7.5-15 yr e) Mature, 15-25 yr f) Mature, 25-40 yr g) Overall Captured in 1977-1980. Levels changed with age during immaturity, unchanged for mature. Japan, Kawana, east Izu Peninsula; Japan, Taiji, southern Kii Peninsula AAS
5813 Placenta	15	Not given	18.0+/-3.63 ug/g Wet wt	Calves, immatures and mature adults captured in 1977-1980. Japan, Kawana, east Izu Peninsula; Japan, Taiji, southern Kii Peninsula AAS
5814 Skin	a) 5 b) 2	a) Not given b) Not given	a) 227+/-1.67 ug/g b) 225+/-2.00 ug/g Wet wt	a) Calf, immature and mature b) Fetus Collected in 1977-1980. Japan, Kawana, east Izu Peninsula; Japan, Taiji, southern Kii Peninsula AAS
5815 Spleen	a) 12 b) 3	a) Not given b) Not given	a) 21.5+/-2.25 ug/g b) 16.5+/-0.49 ug/g Wet wt	a) Calf, immature and mature b) Fetus Collected in 1977-1980. Japan, Kawana, east Izu Peninsula; Japan, Taiji, southern Kii Peninsula AAS

(next page)

Zinc
7440-66-6
Zn
AtW 65.38, MP 419.5 C, BP 908 C, VP 1 mm Hg at 487 C, 10 mm Hg at 590 C

Delphin, striped
STENELLA COERULEOALBA

(continued)

Tissue	Cases Exposure Route	Range	Mean	General Information
5816 Stomach	a) 18 b) 4 c) 14 d) 3	a) Not given b) Not given c) Not given d) Not given	a) 23.2+/-3.70 ug/g b) 19.4+/-3.80 ug/g c) 25.3+/-2.35 ug/g d) 18.8+/-0.55 ug/g Wet wt	a) Calves, immatures and mature adults, first stomach b) Fetus, first stomach c) Calves, immatures and mature adults, second stomach d) Fetus, second stomach Captured in 1977-80. Japan, Kawana, east Izu Peninsula; Japan, Taiji, southern Kii Peninsula AAS
5817 Testis	a) 3 b) 5	a) Not given b) Not given	a) 12.1+/-0.67 ug/g b) 11.0+/-0.50 ug/g Wet wt	a) Calf, immature and mature b) Fetus Collected in 1977-1980. Japan, Kawana, east Izu Peninsula; Japan, Taiji, southern Kii Peninsula AAS

BODY; LIVER; MUSCLES; PANCREAS; LUNGS; HEART; SPLEEN; INTESTINES; STOMACH; KIDNEYS; BLOOD; ADIPOSE TISSUE; TESTES; OVARIES; SKIN; BONES; PLACENTA; MAMMARY GLANDS; MILK; MAMMALS; DOLPHINS; FISHES; SQUID; CADMIUM; ZINC; AQUATIC; ENVIRONMENTAL EXPOSURE; JAPAN; METALS; BIOINDICATORS; BIOLOGICAL MONITORING; BIOACCUMULATION; WATER POLLUTION

Honda, K.; Tatsukawa, R. 1983 Archives of Environmental Contamination and Toxicology 12:543-550

Duck, black
ANAS RUBRIPES

Tissue	Cases Exposure Route	Range	Mean	General Information
5818 Bone	24 Ingestion	81-136 ug/g Dry wt	117 ug/g Dry wt	Collected winters of 1976-77, 1979-80. Extensive interspecies variation. Chesapeake Bay AAS
5819 Kidney	18 Ingestion	57-120 ug/g Dry wt	84 ug/g Dry wt	Collected winters of 1976-77, 1979-80. Extensive interspecies variation. Chesapeake Bay AAS
5820 Liver	128 Ingestion	29-495 ug/g Dry wt	136 ug/g Dry wt	Collected winters of 1976-77, 1979-80. Extensive interspecies variation. Chesapeake Bay AAS

AQUATIC; CADMIUM; LEAD; COPPER; ZINC; LIVER; KIDNEYS; BONES; BIOLOGICAL MONITORING; UNITED STATES; BIOACCUMULATION; BIRDS; TERRESTRIAL; WATERFOWL; DUCKS; ENVIRONMENTAL EXPOSURE; DIETS; METALS

Giulio, R.T.; Scanlon, P.F. 1984 Environmental Pollution (Series A) 35:29-48

Zinc
7440-66-6
Zn
AtW 65.38, MP 419.5 C, BP 908 C, VP 1 mm Hg at 487 C, 10 mm Hg at 590 C

Duck, long-tailed
CLANGULA HYEMALIS

Tissue	Cases Exposure Route	Range	Mean	General Information
5321 Feathers	a) 28 b) 15 c) 6	a) 81-160 mg/kg b) 90-100 mg/kg c) 100-120 mg/kg Dry wt	a) 110 +or- 10 mg/kg b) 95 +or- 3 mg/kg c) 110 +or- 8 mg/kg Dry wt	a) Males b) Males, oiled c) Females Collected 1980-81. Composite samples Poland, Gdansk Bay AAS
5322 Heart	a) 50 b) 40	a) 10-14 mg/kg b) 13-17 mg/kg Wet wt	a) 12.2 +or- 2 mg/kg b) 15 +or- 2 mg/kg Wet wt	a) Males b) Females Collected 1980-81. Composite samples Poland, Gdansk Bay AAS
5323 Liver	a) 50 b) 40	a) 11-18 mg/kg b) 12-17 mg/kg Wet wt	a) 15 +or- 0.9 mg/kg b) 14 +or- 0.7 mg/kg Wet wt	a) Males b) Females Collected 1980-81. Composite samples Poland, Gdansk Bay AAS
5324 Muscle	90	a) 2.3-4.7 mg/kg b) 2.6-5.6 mg/kg c) 11-12 mg/kg d) 7.6-18 mg/kg Wet wt	a) 3.6 +or- 0.4 mg/kg b) 3.8 +or- 0.4 mg/kg c) 12 +or- 0.2 mg/kg d) 13 +or- 3 mg/kg Wet wt	a) Males, breast b) Females, breast c) Males, leg d) Females, leg Collected 1980-81. Composite samples Poland, Gdansk Bay AAS
5325 Stomach	a) 50 b) 40	a) 9.5-14 mg/kg b) 14-18 mg/kg Wet wt	a) 12 +or- 0.9 mg/kg b) 16 +or- 2 mg/kg Wet wt	a) Males b) Females Collected 1980-81. Composite samples Poland, Gdansk Bay AAS

POLAND; BIRDS; IRON; ZINC; MANGANESE; COPPER; LEAD; CADMIUM; COBALT; NICKEL; BIOACCUMULATION; LIVER; MUSCLES; HEART; STOMACH; FEATHERS; AQUATIC; WATERFOWL; ENVIRONMENTAL EXPOSURE

Szefer, P.; Falandysz, J. 1983 Science of the Total Environment 29:269-276

Zinc
7440-66-6
Zn
AtW 65.38, MP 419.5 C, BP 908 C, VP 1 mm Hg at 487 C, 10 mm Hg at 590 C
Duck, mallard
ANAS PLATYRHYNCHOS

Tissue	Cases Exposure Route	Range	Mean	General Information
5326 Bone	a) 8 b) 8 c) 7 d) 6 e) 8 f) 8 g) 8 Ingestion	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given g) Not given	a) 91+/-5 ug/g b) 90+/-4 ug/g c) 95+/-5 ug/g d) 85+/-3 ug/g e) 104+/-4 ug/g f) 87+/-5 ug/g g) 87+/-4 ug/g Dry wt S.E.	a) Controls b) 10 ug Cd/g diet c) 100 ug Cd/g diet d) 10 ug Pb/g diet e) 100 ug Pb/g diet f) 5 ug Cd+5 ug Pb/g diet g) 50 ug Cd+50 ug/g diet Juveniles 128 d old. Fed as Cl salts in 42+/-1 d. e) significantly greater than b), c), f), g). Virginia, Blacksburg GC

KIDNEYS; LIVER; BONES; CADMIUM; LEAD; COPPER; ZINC; DIETS; BIOACCUMULATION; BIRDS; WATERFOWL; DELIBERATE EXPOSURE; AQUATIC; JUVENILES
Di Giulio, R.T.; Scanlon, P.F. 1984 Science of the Total Environment 39:103-110

Tissue	Cases Exposure Route	Range	Mean	General Information
5327 Bone	33 Ingestion	80-176 ug/g Dry wt	118 ug/g Dry wt	Collected winters of 1976-77, 1979-80. Extensive interspecies variation. Chesapeake Bay AAS

AQUATIC; CADMIUM; LEAD; COPPER; ZINC; LIVER; KIDNEYS; BONES; BIOLOGICAL MONITORING; UNITED STATES; BIOACCUMULATION; BIRDS; TERRESTRIAL; WATERFOWL; DUCKS; ENVIRONMENTAL EXPOSURE; DIETS; METALS
Giulio, R.T.; Scanlon, P.F. 1984 Environmental Pollution (Series A) 35:29-48

Tissue	Cases Exposure Route	Range	Mean	General Information
5328 Kidney	a) 8 b) 8 c) 7 d) 6 e) 8 f) 8 g) 8 Ingestion	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given g) Not given	a) 78+/-4 ug/g b) 99+/-6 ug/g c) 125+/-7 ug/g d) 86+/-5 ug/g e) 89+/-4 ug/g f) 100+/-5 ug/g g) 112+/-2 Dry wt S.E.	a) Controls b) 10 ug Cd/g diet c) 100 ug Cd/g diet d) 10 ug Pb/g diet e) 100 ug Pb/g diet f) 5 ug Cd+5 ug Pb/g diet g) 50 ug Cd+50 ug/g diet Juveniles 128 d old. Fed as Cl salts in 42+/-1 d. Cd increased kideny concentrations of Cu & Pb. c) significantly greater than a), b), d)-f) Virginia, Blacksburg GC

KIDNEYS; LIVER; BONES; CADMIUM; LEAD; COPPER; ZINC; DIETS; BIOACCUMULATION; BIRDS; WATERFOWL; DELIBERATE EXPOSURE; AQUATIC; JUVENILES
Di Giulio, R.T.; Scanlon, P.F. 1984 Science of the Total Environment 39:103-110

Zinc
7440-66-6
Zn
AtW 65.38, MP 419.5 C, BP 908 C, VP 1 mm Hg at 487 C, 10 mm Hg at 590 C

Duck, mallard
ANAS PLATYRHYNCHOS

Tissue	Cases Exposure Route	Range	Mean	General Information
5329 Kidney	a) 12 b) 12 c) 12 d) 12 Ingestion	a) Not given b) Not given c) Not given d) Not given	a) 73+/-4 ppm b) 106+/-6 ppm c) 112+/-5 ppm d) 134+/-4 ppm Dry wt S.E.	a) 0 ppm b) 50 ppm c) 150 ppm d) 450 ppm Dry wt S.E. Cd in diet for 42+/-1 d. 11 mo old wild-strain drakes. Virginia Body wt, liver wt, and total aldolase activity (IU) significantly reduced in 450 ppm group. Significant dose-dependent wt increases of kidneys and adrenals. AAS

DUCKS; WATERFOWL; CADMIUM; JUVENILES; DELIBERATE EXPOSURE; LIVER; KIDNEYS; COPPER; ZINC; VIRGINIA; TERRESTRIAL; METABOLISM; AQUATIC; BIRDS
Di Giulio, R.T.; Scanlon, P.F. 1984 Archives of Environmental Contamination and Toxicology 13:765-771

Tissue	Cases Exposure Route	Range	Mean	General Information
5330 Kidney	25 Ingestion	50-148 ug/g Dry wt	86 ug/g Dry wt	Collected winters of 1976-77, 1979-80. Extensive interspecies variation. Chesapeake Bay AAS

AQUATIC; CADMIUM; LEAD; COPPER; ZINC; LIVER; KIDNEYS; BONES; BIOLOGICAL MONITORING; UNITED STATES; BIOACCUMULATION; BIRDS; TERRESTRIAL; WATERFOWL; DUCKS; ENVIRONMENTAL EXPOSURE; DIETS; METALS
Giulio, R.T.; Scanlon, P.F. 1984 Environmental Pollution (Series A) 35:29-48

Tissue	Cases Exposure Route	Range	Mean	General Information
5331 Liver	a) 8 b) 8 c) 7 d) 6 e) 8 f) 8 g) 8 Ingestion	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given g) Not given	a) 121+/-10 ug/g b) 112+/-8 ug/g c) 147+/-9 ug/g d) 131+/-9 ug/g e) 128+/-6 ug/g f) 123+/-6 ug/g g) 127+/-12 ug/g Dry wt S.E.	a) Controls b) 10 ug Cd/g diet c) 100 ug Cd/g diet d) 10 ug Pb/g diet e) 100 ug Pb/g diet f) 5 ug Cd+5 ug Pb/g diet g) 50 ug Cd+50 ug/g diet Juveniles 128 d old. Fed as Cl salts in 42+/-1 d. c) significantly greater than b). Virginia, Blacksburg GC

KIDNEYS; LIVER; BONES; CADMIUM; LEAD; COPPER; ZINC; DIETS; BIOACCUMULATION; BIRDS; WATERFOWL; DELIBERATE EXPOSURE; AQUATIC; JUVENILES
Di Giulio, R.T.; Scanlon, P.F. 1984 Science of the Total Environment 39:103-110

Zinc
7440-66-6
Zn
AtW 65.38, MP 419.5 C, BP 908 C, VP 1 mm Hg at 487 C, 10 mm Hg at 590 C

Duck, mallard
ANAS PLATYRHYNCHOS

Tissue	Cases Exposure Route	Range	Mean	General Information
5332 Liver	a) 12 b) 12 c) 12 d) 12 Ingestion	a) Not given b) Not given c) Not given d) Not given	a) 123+/-5 ppm b) 144+/-6 ppm c) 171+/-13 ppm d) 254+/-20 ppm Dry wt S.E.	a) 0 ppm b) 50 ppm c) 150 ppm d) 450 ppm Dry wt S.E. Cd in diet for 42+/-1 d. 11 mo old wild-strain drakes. Virginia Body wt, liver wt, and total aldolase activity (IU) significantly reduced in 450 ppm group. Significant dose-dependent wt increases of kidneys and adrenals. AAS
DUCKS; WATERFOWL; CADMIUM; JUVENILES; DELIBERATE EXPOSURE; LIVER; KIDNEYS; COPPER; ZINC; VIRGINIA; TERRESTRIAL; METABOLISM; AQUATIC; BIRDS Di Giulio, R.T.; Scanlon, P.F. 1984 Archives of Environmental Contamination and Toxicology 13:765-771				

Tissue	Cases Exposure Route	Range	Mean	General Information
5333 Liver	157 Ingestion	21-990 ug/g Dry wt	161 ug/g Dry wt	Collected winters of 1976-77, 1979-80. Extensive interspecies variation. Chesapeake Bay AAS
AQUATIC; CADMIUM; LEAD; COPPER; ZINC; LIVER; KIDNEYS; BONES; BIOLOGICAL MONITORING; UNITED STATES; BIOACCUMULATION; BIRDS; TERRESTRIAL; WATERFOWL; DUCKS; ENVIRONMENTAL EXPOSURE; DIETS; METALS Giulio, R.T.; Scanlon, P.F. 1984 Environmental Pollution (Series A) 35:29-48				

Duck, ring-necked
AYTHYA COLLARIS

Tissue	Cases Exposure Route	Range	Mean	General Information
5334 Bone	23 Ingestion	119-182 ug/g Dry wt	145 ug/g Dry wt	Collected winters of 1976-77, 1979-80. Extensive interspecies variation. Chesapeake Bay AAS
5335 Kidney	8 Ingestion	58-82 ug/g Dry wt	66 ug/g Dry wt	Collected winters of 1976-77, 1979-80. Extensive interspecies variation. Chesapeake Bay AAS
5336 Liver	23 Ingestion	102-269 ug/g Dry wt	168 ug/g Dry wt	Collected winters of 1976-77, 1979-80. Extensive interspecies variation. Chesapeake Bay AAS
AQUATIC; CADMIUM; LEAD; COPPER, ZINC; LIVER; KIDNEYS; BONES; BIOLOGICAL MONITORING; UNITED STATES; BIOACCUMULATION; BIRDS; TERRESTRIAL; WATERFOWL; DUCKS; ENVIRONMENTAL EXPOSURE; DIETS; METALS Giulio, R.T.; Scanlon, P.F. 1984 Environmental Pollution (Series A) 35:29-48				

Zinc
7440-66-6
Zn
AtW 65.38, MP 419.5 C, BP 908 C, VP 1 mm Hg at 487 C, 10 mm Hg at 590 C

Duck, ruddy
OXYURA JAMAICENSIS

Tissue	Cases Exposure Route	Range	Mean	General Information
5337 Bone	20 Ingestion	121-183 ug/g Dry wt	145 ug/g Dry wt	Collected winters of 1976-77, 1979-80. Extensive interspecies variations. Chesapeake Bay AAS
5338 Kidney	20 Ingestion	57-88 ug/g Dry wt	73 ug/g Dry wt	Collected winters of 1976-77, 1979-80. Extensive interspecies variations. Chesapeake Bay AAS
5339 Liver	20 Ingestion	38-129 ug/g Dry wt	103 ug/g Dry wt	Collected winters of 1976-77, 1979-80. Extensive interspecies variations. Chesapeake Bay AAS

AQUATIC; CADMIUM; LEAD; COPPER; ZINC; LIVER; KIDNEYS; BONES; BIOLOGICAL MONITORING; UNITED STATES; BIOACCUMULATION; BIRDS; TERRESTRIAL; WATERFOWL; DUCKS; ENVIRONMENTAL EXPOSURE; DIETS; METALS

Giulio, R.T.; Scanlon, P.F. 1984 Environmental Pollution (Series A) 35:29-48

Duck, wood
AIX SPONSA

Tissue	Cases Exposure Route	Range	Mean	General Information
5340 Liver	13 Ingestion	42-298 ug/g Dry wt	153 ug/g Dry wt	Collected winters of 1976-77, 1979-80. Extensive interspecies variation. Chesapeake Bay AAS

AQUATIC; CADMIUM; LEAD; COPPER; ZINC; LIVER; KIDNEYS; BONES; BIOLOGICAL MONITORING; UNITED STATES; BIOACCUMULATION; BIRDS; TERRESTRIAL; WATERFOWL; DUCKS; ENVIRONMENTAL EXPOSURE; DIETS; METALS

Giulio, R.T.; Scanlon, P.F. 1984 Environmental Pollution (Series A) 35:29-48

Eagle, booted
HIERAETUS PENNATUS

Tissue	Cases Exposure Route	Range	Mean	General Information
5341 Eggs	a) 1 b) 3 Ingestion	a) Not given b) Not given	a) 13.000 ppm b) 14.573 ppm Wet wt	a) Collected 1981 b) 1983. Spain AAS

EGGS; ENVIRONMENTAL EXPOSURE; SPAIN; ADULTS; METAL POISONING; DDE; DDD; DDT; DIELDRIN; HEXACHLOROCYCLOHEXANE; HEPTACHLOR EPOXIDE; ALDRIN; POLYCHLORINATED BIPHENYLS; MERCURY; LEAD; CADMIUM; COPPER; ZINC; BIOACCUMULATION; BIOCONCENTRATION; HEALTH HAZARDS; PESTICIDE RESIDUES; BIRDS; TERRESTRIAL

Gonzales, M.J.; Hernandez, L.M.; Rico, M.C.; Baluja, G. 1984 Journal of Environmental Health and Science

Zinc
7440-66-6
Zn
AtW 65.38, MP 419.5 C, BP 908 C, VP 1 mm Hg at 487 C, 10 mm Hg at 590 C

Eagle, imperial
AQUILA HELIACA

Tissue	Cases Exposure Route	Range	Mean	General Information
5342 Eggs	a) 6 b) 3 c) 3 d) 10 Ingestion	a) Not given b) Not given c) Not given d) Not given	a) 9.661 ppm b) 9.100 ppm c) 12.470 ppm d) 10.148 ppm Wet wt	a) Collected 1980 b) 1981 c) 1982 d) 1983. Spain AAS
EGGS; ENVIRONMENTAL EXPOSURE; SPAIN; ADULTS; METAL POISONING; DDE; DDD; DDT; DIELDRIN; HEXACHLOROCYCLOHEXANE; HEPTACHLOR EPOXIDE; ALDRIN; POLYCHLORINATED BIPHENYLS; MERCURY; LEAD; CADMIUM; COPPER; ZINC; BIOACCUMULATION; BIOCONCENTRATION; HEALTH HAZARDS; PESTICIDE RESIDUES; BIRDS; TERRESTRIAL				
Gonzales, M.J.; Hernandez, L.M.; Rico, M.C.; Baluja, G. 1984 Journal of Environmental Health and Science				

Earthworm
LUMBRICUS RUBELLUS

Tissue	Cases Exposure Route	Range	Mean	General Information
5343 Body		717-3500 mg/kg	Not given	Collected from 31 sampling sites 1-15 km from zinc smelter. Soil content 10-1220 mg/kg. Mean dry wt 86+/-28 mg. Netherlands, Eindhoven, S.E., Dutch Kempen region AAS
WORMS; LEAD; ZINC; NETHERLANDS; BODY; SMELTERS; SOILS; CADMIUM; COPPER; TERRESTRIAL; ENVIRONMENTAL EXPOSURE				
Ma, W.; Edelman, T.; van Beersum, I.; Jans, T. 1983 Bulletin of Environmental Contamination and Toxicology 30:424-427				

Tissue	Cases Exposure Route	Range	Mean	General Information
5344 Body, whole	37	17.6-39.7 ug/wet g	27.0+/-4.64 ug/wet g	Relatively high levels found in pre-clitellar region. Total burden increased with increased body length up to 18 cm, thereafter it remained constant. Accumulation depended upon metabolic turnover. Correlations between metal concentrations and body weight were significantly negative. Japan, Matsuyama City, Tsubaki shrine AAS
IRON; MANGANESE; ZINC; COPPER; LEAD; NICKEL; COBALT; ARSENIC; MERCURY; CADMIUM; BIOACCUMULATION; SOILS; BIOINDICATORS; LAND POLLUTION; EARTHWORMS; BODY; TERRESTRIAL; ENVIRONMENTAL EXPOSURE; JAPAN; METALS; BIOLOGICAL MONITORING				
Honda, K.; Nasu, T.; Tatsukawa, R. 1984 Archives of Environmental Contamination and Toxicology 13:427-432				

Zinc
7440-66-6
Zn
AtW 65.38, MP 419.5 C, BP 908 C, VP 1 mm Hg at 487 C, 10 mm Hg at 590 C

Eel
ANGUILLA AUSTRALIS

Tissue	Cases Exposure Route	Range	Mean	General Information
5345 Gills	a) 9 b) 10	a) 85-104 ug/g b) 95-103 ug/g	a) Not given b) Not given	a) Upstream of metal inflow b) Downstream Ranges of means from 3 and 4 sampling areas, respectively Australia, Tasmania, South Esk River AAS
GILLS; MUSCLES; LIVER; FISHES; AUSTRALIA; CADMIUM; ZINC; COPPER; METALS; WATER POLLUTION; TASMANIA; AQUATIC; ENVIRONMENTAL EXPOSURE Norris, R.H.; Lake, P.S. 1984 Bulletin of Environmental Contamination and Toxicology 33:348-354				

Fish
PERCA FLUVIATILIS

Tissue	Cases Exposure Route	Range	Mean	General Information
5346 Muscle	a) 8 b) 10	a) 28-93 ug/g b) 34-388 ug/g Dry wt	a) Not given b) Not given	a) Upstream of metal inflow b) Downstream Ranges of means from 3 and 4 sampling areas, respectively Australia, Tasmania, South Esk River AAS
GILLS; MUSCLES; LIVER; FISHES; AUSTRALIA; CADMIUM; ZINC; COPPER; METALS; WATER POLLUTION; TASMANIA; AQUATIC; ENVIRONMENTAL EXPOSURE Norris, R.H.; Lake, P.S. 1984 Bulletin of Environmental Contamination and Toxicology 33:348-354				

Gadwall
ANAS STREPERA

Tissue	Cases Exposure Route	Range	Mean	General Information
5347 Bone	14 Ingestion	90-172 ug/g Dry wt	130 ug/g Dry wt	Collected winters of 1976-77, 1979-80. Extensive interspecies variation. Chesapeake Bay AAS
5348 Kidney	9 Ingestion	67-132 ug/g Dry wt	94 ug/g Dry wt	Collected winters of 1976-77, 1979-80. Extensive interspecies variation. Chesapeake Bay AAS
5349 Liver	32 Ingestion	94-390 ug/g Dry wt	197 ug/g Dry wt	Collected winters of 1976-77, 1979-80. Extensive interspecies variation. Chesapeake Bay AAS
AQUATIC; CADMIUM; LEAD; COPPER; ZINC; LIVER; KIDNEYS; BONES; BIOLOGICAL MONITORING; UNITED STATES; BIOACCUMULATION; BIRDS; TERRESTRIAL; WATERFOWL; DUCKS; ENVIRONMENTAL EXPOSURE; DIETS; METALS Giulio, R.T.; Scanlon, P.F. 1984 Environmental Pollution (Series A) 35:29-48				

Zinc
7440-66-6
Zn
AtW 65.38, MP 419.5 C, BP 908 C, VP 1 mm Hg at 487 C, 10 mm Hg at 590 C
Hobby
FALCO SUBBUTEO

Tissue	Cases Exposure Route	Range	Mean	General Information
5350 Eggs	a) 3 b) 4 Ingestion	a) Not given b) Not given	a) 11.040 ppm b) 13.372 ppm Wet wt	a) Collected 1982 b) 1983. Spain AAS

EGGS; ENVIRONMENTAL EXPOSURE; SPAIN; ADULTS; METAL POISONING; DDE; DDD; DDT; DIELDRIN; HEXACHLOROCYCLOHEXANE; HEPTACHLOR EPOXIDE; ALDRIN; POLYCHLORINATED BIPHENYLS; MERCURY; LEAD; CADMIUM; COPPER; ZINC; BIOACCUMULATION; BIOCONCENTRATION; HEALTH HAZARDS; PESTICIDE RESIDUES; BIRDS; TERRESTRIAL

Gonzales, M.J.; Hernandez, L.M.; Rico, M.C.; Baluja, G. 1984 Journal of Environmental Health and Science

Horse

Tissue	Cases Exposure Route	Range	Mean	General Information
5351 Blood, plasma	a) 16 b) 21 c) 1 Ingestion	a) Not applicable b) Not applicable c) Not applicable	a) 16.52+/-4.28 umol/l b) 22.40+/-10.10 umol/l c) 26.9 umol/l	a) Normal, controls b) Pastured adjacent to c) c) Pastured near Pb-Zn smelter Excessive Zn intake caused hypocuprosis in c). Treated with 60 mg Cu-glycinate SC. Australia Severe lameness, stiffened gait.
5352 Kidney	a) 40 b) 2 Ingestion	a) Not applicable b) Not applicable	a) 2.30+/-1.03 mmol/kg b) 9.57+/-.41 mmol/kg	a) Normal, controls b) Pastured in an industrial area Pasture contained elevated Zn and Fe, moderately elevated Pb, normal Cu. Excessive Zn intake caused hypocuprosis. Australia Severe lameness, stiffened gait. Multiple bony enlargements of legs and joints, degenerative arthroses of shoulder and hip joints, histological evidence consistent with osteoporosis.
5353 Liver	a) 40 b) 2 Ingestion	a) Not applicable b) Not applicable	a) 6.41+/-3.31 mmol/kg b) 94.86+/-7.43 mmol/kg	a) Normal, controls b) Pastured in an industrial area Pasture contained elevated Zn and Fe, moderately elevated Pb, normal Cu. Excessive Zn intake caused hypocuprosis. Australia Severe lameness, stiffened gait. Multiple bony enlargements of legs and joints, degenerative arthroses of shoulder and hip joints, histological evidence consistent with osteoporosis.

LIVER; KIDNEYS; BLOOD SERUM; BLOOD PLASMA; ENVIRONMENTAL EXPOSURE; HORSES; TERRESTRIAL; METAL POISONING; AUSTRALIA; BONE DISEASES; AUTOPSIES; JUVENILES; COPPER; ZINC; LEAD; IRON; FOOD CONTAMINATION; BIOACCUMULATION; HEALTH HAZARDS; LAND POLLUTION

Eamens, G.J.; Macadam, J.F.; Laing, E.A. 1984 Australian Veterinary Journal 61(7):205-207

Zinc
7440-66-6
Zn
AtW 65.38, MP 419.5 C, BP 908 C, VP 1 mm Hg at 487 C, 10 mm Hg at 590 C

Kite, black
MILVUS MIGRANS

Tissue	Cases Exposure Route	Range	Mean	General Information
5354 Eggs	a) 2 b) 5 c) 4 Ingestion	a) Not given b) Not given c) Not given	a) 12.180 ppm b) 10.980 ppm c) 9.622 ppm Wet wt	a) Collected 1981 b) 1982 c) 1983. Spain AAS
EGGS; ENVIRONMENTAL EXPOSURE; SPAIN; ADULTS; METAL POISONING; DDE; DDD; DDT; DIELDRIN; HEXACHLOROCYCLOHEXANE; HEPTACHLOR EPOXIDE; ALDRIN; POLYCHLORINATED BIPHENYLS; MERCURY; LEAD; CADMIUM; COPPER; ZINC; BIOACCUMULATION; BIOCONCENTRATION; HEALTH HAZARDS; PESTICIDE RESIDUES; BIRDS; TERRESTRIAL				
Gonzales, M.J.; Hernandez, L.M.; Rico, M.C.; Baluja, G. 1984 Journal of Environmental Health and Science				

Kite, red
MILVUS MILVUS

Tissue	Cases Exposure Route	Range	Mean	General Information
5355 Eggs	a) 4 b) 4 c) 2 Ingestion	a) Not given b) Not given c) Not given	a) 11.080 ppm b) 10.969 ppm c) 17.180 ppm Wet wt	a) Collected 1981 b) 1982 c) 1983. Spain AAS
EGGS; ENVIRONMENTAL EXPOSURE; SPAIN; ADULTS; METAL POISONING; DDE; DDD; DDT; DIELDRIN; HEXACHLOROCYCLOHEXANE; HEPTACHLOR EPOXIDE; ALDRIN; POLYCHLORINATED BIPHENYLS; MERCURY; LEAD; CADMIUM; COPPER; ZINC; BIOACCUMULATION; BIOCONCENTRATION; HEALTH HAZARDS; PESTICIDE RESIDUES; BIRDS; TERRESTRIAL				
Gonzales, M.J.; Hernandez, L.M.; Rico, M.C.; Baluja, G. 1984 Journal of Environmental Health and Science				

Koala
PHASCOLARCTOS CINEREUS (Goldfuss)

Tissue	Cases Exposure Route	Range	Mean	General Information
5356 Liver	13		2.97+/-0.09 mmol/kg	Dried liver. Mean age class 3.6+/-0.4 (1 = weanling, 7 = full grown, mature). Levels stable with age. Australia, Victoria, East Gippsland and French Island AAS
LIVER; COPPER; MANGANESE; ZINC; COBALT; BLOOD PLASMA; KOALAS; AUSTRALIA; DIETS; TERRESTRIAL; ENVIRONMENTAL EXPOSURE				
McOrist, S.; Thomas, K.W. 1984 Journal of Wildlife Diseases 20(3):220-225				

Zinc
7440-66-6
Zn
AtW 65.38, MP 419.5 C, BP 908 C, VP 1 mm Hg at 487 C, 10 mm Hg at 590 C

Lizard, water
TRITURUS PYRRHOGASTER

Tissue	Cases Exposure Route	Range	Mean	General Information
5357 Kidney	a) 5 b) 5 Injection	a) Not given b) Not given	a) 30.9+/-15.5 ug/g b) 32.2+/-13.4 ug/g Wet wt	a) Controls, distilled water (0.1 ml/head), I.M. b) CdCl2, I.M. during 11 d (0.5 mg, 3x and 1.0 mg Cd/kg body wt, 2x), killed 1 d after last injection Kidney wt 36+/-8-43+/-6 mg ES
5358 Liver	a) 5 b) 5 Injection	a) Not given b) Not given	a) 18.6+/-2.7 ug/g b) 14.8+/-7.0 ug/g Wet wt	a) Controls, distilled water (0.1 ml/head), I.M. b) CdCl2, I.M. during 11 d (0.5 mg 3x and 1.0 mg Cd/kg body wt, 2x), killed 1 d after last injection Liver wt 349+/-108-411+/-80 mg ES
AMPHIBIANS; LIVER; KIDNEYS; DELIBERATE EXPOSURE; CADMIUM; COPPER; ZINC; AQUATIC; TERRESTRIAL; IRON; MAGNESIUM; CALCIUM; PHOSPHORUS Suzuki, K.T.; Akitomi, H.; Kawamura, R. 1984 Toxicology Letters 21:179-184				

Mackerel, Atka
PLEUROGRAMMUS MONOPTERYGIUS

Tissue	Cases Exposure Route	Range	Mean	General Information
5359 Muscle	20 Ingestion	Not given	5.067+/-0.857 ug/g Wet wt	Off Kodiak Island, AK. Mean wt 461+/-156 g. Pacific Ocean ES
FISHES; BIOLOGICAL MONITORING; PACIFIC OCEAN; ALUMINUM; BARIUM; CALCIUM; CHROMIUM; COPPER; IRON; MERCURY; POTASSIUM; LITHIUM; MAGNESIUM; MANGANESE; SODIUM; PHOSPHORUS; STRONTIUM; ZINC; AQUATIC; ENVIRONMENTAL EXPOSURE; WATER POLLUTION; FOOD CONTAMINATION; MUSCLES Teeny, F.M.; Gauglitz, E.J., Jr.; Hall, A.S.; Houle, C.R. 1984 Journal of Agricultural and Food Chemistry 32:852-855				

Mayfly
EPHEMEROPTERA

Tissue	Cases Exposure Route	Range	Mean	General Information
5360 Body		a) 600-780 ppm b) 780-980 ppm c) 0-710 ppm d) 550-580 ppm	a) Not given b) Not given c) Not given d) Not given	a) Controls during dry weather b) Controls during rain, only c) Station 2, which drains half of business district, during wet weather d) Station 3, which receives total cumulative runoff load from the city, during dry weather Additional data for Station 1, a control with an artificial substrate, and three weather regimes: dry, rain and snow/thaw (wet= rain and snow/thaw) Estimated from graph Massachusetts, Greenfield, Green River AAS
URBAN AREAS; WATER POLLUTION; BIOINDICATORS; COPPER; CADMIUM; ZINC; LEAD; INSECTS; AQUATIC; BENTHOS; BODY; MASSACHUSETTS; ENVIRONMENTAL EXPOSURE Medeiros, C.; LeBlanc, R.; Coler, R.A. 1983 Environmental Toxicology and Chemistry 2:119-126				

Zinc
7440-66-6
Zn
AtW 65.38, MP 419.5 C, BP 908 C, VP 1 mm Hg at 487 C, 10 mm Hg at 590 C

Minnow, fathead
PIMEPHALES PROMELAS

Tissue	Cases Exposure Route	Range	Mean	General Information
5361 Body, whole		a) Not given b) Not given	a) 24.2+/-2.33 ug/g b) 86.4+/-7.27 ug/g S.E.	a) From hatchery ponds at US EPA Newtown Fish Toxicology Lab in Newtown, Ohio, 3.80 ug/L in water b) From flyash pond at E.W. Brown Power Plant near Harrodsburg, KY, 7.00 ug/L in water. AAS
5362 Gills		a) Not given b) Not given	a) 50.8+/-7.92 ug/g b) 85.6+/-10.1 ug/g S.E.	a) From hatchery ponds at US EPA Newtown Fish Toxicology Lab in Newtown, Ohio, 3.80 ug/L in water b) From flyash pond at E.W. Brown Power Plant near Harrodsburg, KY, 7.00 ug/L in water. AAS
5363 Organs		a) Not given b) Not given	a) 31.9+/-1.05 ug/g b) 71.9+/-3.59 ug/g S.E.	a) From hatchery ponds at US EPA Newtown Fish Toxicology Lab in Newtown, Ohio, 3.80 ug/L in water b) From flyash pond at E.W. Brown Power Plant near Harrodsburg, KY, 7.00 ug/L in water. AAS

BODY; ORGANS; GILLS; CADMIUM; COPPER; ZINC; ENVIRONMENTAL EXPOSURE; DELIBERATE EXPOSURE; METALS; BIOCONCENTRATION; BIOLOGICAL MONITORING; COAL; FOSSIL-FUELED POWER PLANTS; FLY ASH; FISHES; WATER POLLUTION; INDUSTRIAL POLLUTION

Benson, W.H.; Birge, W.J. 1984 Environmental Toxicology and Chemistry 4:209-217

Mollusc sp.
BULLIA RHODOSTOMA

Tissue	Cases Exposure Route	Range	Mean	General Information
5364 Body	80	a) Not given b) Not given c) Not given d) Not given	a) 39+/-9 ug/g b) 38+/-8 ug/g c) 39+/-11 ug/g d) 40+/-10 ug/g Wet wt	a) Control b) 25 ug/L c) 50 ug/L d) 100 ug/L. 3-wk exposures to sublethal levels. South Africa

MOLLUSKS; AQUATIC; BODY; MANTLE; GILLS; DIGESTIVE GLAND; SYPHON; MUSCLES; GONADS; FOOT; ENVIRONMENTAL EXPOSURE; SOUTH AFRICA; ZINC; CADMIUM; COPPER, LEAD; NICKEL; COBALT; CHROMIUM; METALS; BIOINDICATORS; BIOACCUMULATION; BIOLOGICAL MONITORING; WATER POLLUTION

Watling, H.R.; Watling, R.J. 1983 Bulletin of Environmental Contamination and Toxicology 31:339-343

Zinc
7440-66-6
Zn
AtW 65.38, MP 419.5 C, BP 908 C, VP 1 mm Hg at 487 C, 10 mm Hg at 590 C

Mollusk
PERNA PERNA

Tissue	Cases Exposure Route	Range	Mean	General Information
5365 Body	10	a) Not given b) Not given	a) 12.0 +or- 3.1 ug/g b) 12.7 +or- 4.3 ug/g Wet wt	a) Controls b) 100 ug/l for 3 wk South Africa, Knysna Heads AAS
MOLLUSKS; BIOACCUMULATION; BIOINDICATORS; WATER POLLUTION; CADMIUM; CHROMIUM; COBALT; COPPER; LEAD; NICKEL; ZINC; BODY; SOUTH AFRICA				
Watling, H.R. 1983 Bulletin of Environmental Contamination and Toxicology 30:317-322				

Mussel
CHOROMYTILUS MERIDIONALIS

Tissue	Cases Exposure Route	Range	Mean	General Information
5366 Body	10	a) Not given b) Not given	a) 14.3 +or- 2.5 ug/g b) 15.8 +or- 2.6 ug/g Wet wt	a) Controls b) 100 ug/l for 3 wk South Africa, Cape Town, Bloubergstrand AAS
MOLLUSKS; BIOACCUMULATION; BIOINDICATORS; WATER POLLUTION; CADMIUM; CHROMIUM; COBALT; COPPER; LEAD; NICKEL; ZINC; BODY; SOUTH AFRICA				
Watling, H.R. 1983 Bulletin of Environmental Contamination and Toxicology 30:317-322				

Myctophid

Tissue	Cases Exposure Route	Range	Mean	General Information
5367 Body, whole	a) 10 b) 4	a) Not given b) Not given	a) 12.9 ug/g b) 8.71 ug/g Wet wt	a) Small fish (3.8-4.5 cm) b) Large fish (6.5-7.5 cm) Food of striped dolphin. Japan, Kawana, east Izu Peninsula; Japan, Taiji, southern Kii Peninsula AAS
BODY; LIVER; MUSCLES; PANCREAS; LUNGS; HEART; SPLEEN; INTESTINES; STOMACH; KIDNEYS; BLOOD; ADIPOSE TISSUE; TESTES; OVARIES; SKIN; BONES; PLACENTA; MAMMARY GLANDS; MILK; MAMMALS; DOLPHINS; FISHES; SQUID; CADMIUM; ZINC; AQUATIC; ENVIRONMENTAL EXPOSURE; JAPAN; METALS; BIOINDICATORS; BIOLOGICAL MONITORING; BIOACCUMULATION; WATER POLLUTION				
Honda, K.; Tatsukawa, R. 1983 Archives of Environmental Contamination and Toxicology 12:543-550				

Zinc
7440-66-6
Zn
AtW 65.38, MP 419.5 C, BP 908 C, VP 1 mm Hg at 487 C, 10 mm Hg at 590 C
Oldsquaw
CLANGULA HYEMALIS

Tissue	Cases Exposure Route	Range	Mean	General Information
5368 Bone	36 Ingestion	152-259 ug/g Dry wt	206 ug/g Dry wt	Collected winters of 1976-77, 1979-80. Pooled data includes white-winged scoters. Chesapeake Bay AAS
5369 Liver	36 Ingestion	59-284 ug/g Dry wt	158 ug/g Dry wt	80% average recovery, data not corrected for recovery. Data pooled includes white-winged scoters. Chesapeake Bay AAS

AQUATIC; CADMIUM; LEAD; COPPER; ZINC; LIVER; KIDNEYS; BONES; BIOLOGICAL MONITORING; UNITED STATES; BIOACCUMULATION; BIRDS; TERRESTRIAL; WATERFOWL; DUCKS; ENVIRONMENTAL EXPOSURE; DIETS; METALS
Giulio, R.T.; Scanlon, P.F. 1984 Environmental Pollution (Series A) 35:29-48

Otter
LUTRA CANADENSIS

Tissue	Cases Exposure Route	Range	Mean	General Information
5370 Intestine	4 Ingestion	Not given	34.2+/-8.9 ug/g	Undisturbed watershed. Specimens from fur trapper. Canada, Ontario, Georgian Bay, Tadenac Lake ES
5371 Kidney	4 Ingestion	Not given	19.6+/-3.9 ug/g	Undisturbed watershed. Specimens from fur trapper. Canada, Ontario, Georgian Bay, Tadenac Lake ES
5372 Liver	4 Ingestion	Not given	26.5+/-5.8 ug/g	Undisturbed watershed. Specimens from fur trapper. Canada, Ontario, Georgian Bay, Tadenac Lake ES
5373 Muscle	4 Ingestion	Not given	50.5+/-34.0 ug/g	Undisturbed watershed. Specimens from fur trapper. Canada, Ontario, Georgian Bay, Tadenac Lake ES

BEAVERS; OTTERS; RACCOONS; CANADA; BIOACCUMULATION; BIOMAGNIFICATION; SELENIUM; IRON; COPPER; CADMIUM; CALCIUM; ALUMINUM; MAGNESIUM; MANGANESE; SODIUM; NICKEL; PHOSPHORUS; ZINC; POTASSIUM; DETOXIFICATION; DIETS; LIVER; KIDNEYS; INTESTINES; MUSCLES; AQUATIC; TERRESTRIAL; ENVIRONMENTAL EXPOSURE; BIOLOGICAL MONITORING
Wren, C.D. 1984 Science of the Total Environment 34:177-184

Zinc
7440-66-6
Zn
AtW 65.38, MP 419.5 C, BP 908 C, VP 1 mm Hg at 487 C, 10 mm Hg at 590 C

Otter, river
LUTRA CANADENSIS

Tissue	Cases Exposure Route	Range	Mean	General Information
5374 Bone	a) 198 b) 78	a) <0.08-822.93 mg/g b) <0.08-587.05 mg/g Dry wt	a) 179.13 +or- 9.49 mg/g b) 138.71 +or- 14.39 mg/g Dry wt	a) 1979-80 b) 1980-81 Collected during trapping seasons Virginia, Tidewater region AAS
5375 Kidney	a) 221 b) 169	a) <0.08-564.34 mg/g b) 21.53-601.59 mg/g Dry wt	a) 78.91 +or- 4.88 mg/g b) 176.23 +or- 9.93 mg/g Dry wt	a) 1979-80 b) 1980-81 Collected during trapping seasons Virginia, Tidewater region AAS
5376 Liver	a) 226 b) 131	a) 0.08-235.78 mg/g b) <0.08-683.85 mg/g Dry wt	a) 62.63 +or- 2.17 mg/g b) 154.38 +or- 11.82 mg/g Dry wt	a) 1979-80 b) 1980-81 Collected during trapping seasons Virginia, Tidewater region AAS

OTTERS; CADMIUM; COPPER; LEAD; ZINC; BIOACCUMULATION; WATER POLLUTION; BONES; KIDNEYS; LIVER; VIRGINIA
Anderson-Bledsoe, K.L.; Scanlon, P.F. 1983 Bulletin of Environmental Contamination and Toxicology 30:442-447

Oyster
CRASSOSTREA MARGARITACEA

Tissue	Cases Exposure Route	Range	Mean	General Information
5377 Body	10	a) Not given b) Not given	a) 115 +or- 20 ug/g b) 128 +or- 33 ug/g Wet wt	a) Controls b) 100 ug/l for 3 wk South Africa, Knysna Heads AAS

MOLLUSKS; BIOACCUMULATION; BIOINDICATORS; WATER POLLUTION; CADMIUM; CHROMIUM; COBALT; COPPER; LEAD; NICKEL; ZINC; BODY; SOUTH AFRICA
Watling, H.R. 1983 Bulletin of Environmental Contamination and Toxicology 30:317-322

Zinc
7440-66-6
Zn
AtW 65.38, MP 419.5 C, BP 908 C, VP 1 mm Hg at 487 C, 10 mm Hg at 590 C

Oyster, American
CRASSOSTREA VIRGINICA

Tissue	Cases Exposure Route	Range	Mean	General Information
5378 Body	a) 104 b) 129 c) 95 d) 281 e) 376 Ingestion	a) 49-2560 ug/g b) 199-1410 ug/g c) 72-1550 ug/g d) 16-1350 ug/g e) 12-1510 ug/g Wet wt	a) 1226 ug/g b) 794 ug/g c) 753 ug/g d) 609 ug/g e) 593 ug/g Wet wt	a) 1976 b) 1977 c) 1978 d) 1979 e) 1980 Biological monitoring for heavy metals in shellfish 1976-1980. Residues were well below safe levels. No significant yearly trends. Maryland, Chesapeake Bay area, tributaries AAS

CLAMS; BLUE CRABS; SHELLFISH; CHESAPEAKE BAY; MARYLAND; BIOLOGICAL MONITORING; BIOCONCENTRATION; COPPER; ZINC; LEAD; CADMIUM; ARSENIC; MERCURY; CHROMIUM; WATER POLLUTION; FOOD CONTAMINATION; AQUATIC; MOLLUSKS; ENVIRONMENTAL EXPOSURE
Eisenberg, M.; Topping, J.J. 1984 Journal of Environmental Science and Health B19(7):649-671

Oyster, Pacific
CRASSOSTREA GIGAS

Tissue	Cases Exposure Route	Range	Mean	General Information
5379 Body	10	a) Not given b) Not given	a) 120 +or- 48 ug/g b) 132 +or- 50 ug/g Wet wt	a) Controls b) 100 ug/l for 3 wk South Africa, Knysna Heads AAS

MOLLUSKS; BIOACCUMULATION; BIOINDICATORS; WATER POLLUTION; CADMIUM; CHROMIUM; COBALT; COPPER; LEAD; NICKEL; ZINC; BODY; SOUTH AFRICA
Watling, H.R. 1983 Bulletin of Environmental Contamination and Toxicology 30:317-322

Perch
PERCA FLUVIATILIS

Tissue	Cases Exposure Route	Range	Mean	General Information
5380 Gills	a) 3 b) 5	a) 87-98 ug/g b) 141-963 ug/g Dry wt	a) Not given b) Not given	a) Upstream of metal inflow b) Downstream Ranges of means from 2 and 3 sampling areas, respectively Australia, Tasmania, South Esk River 1

GILLS; MUSCLES; LIVER; FISHES; AUSTRALIA; CADMIUM; ZINC; COPPER; METALS; WATER POLLUTION; TASMANIA; AQUATIC; ENVIRONMENTAL EXPOSURE
Norris, R.H.; Lake, P.S. 1984 Bulletin of Environmental Contamination and Toxicology 33:348-354

Zinc
7440-66-6
Zn
AtW 65.38, MP 419.5 C, BP 908 C, VP 1 mm Hg at 487 C, 10 mm Hg at 590 C

Perch
PERCA FLUVIATILIS

Tissue	Cases Exposure Route	Range	Mean	General Information
5381 Liver	a) 10 b) 10 c) 10 Ingestion	a) Not given b) Not given c) Not given	a) 85+/-4 ug/g b) 84+/-5 ug/g c) 85+/-5 ug/g Dry wt	a) Controls b) 1:200 diluted effluent c) 1:20 diluted effluent 27 d exposure to heavy-metal-containing artificial effluent, designed to simulate effluent of a sulfide ore smelter. No significant uptake. Sweden AAS

LIVER; MUSCLES; FISHES; AQUATIC; DELIBERATE EXPOSURE; SWEDEN; METAL POISONING; ZINC; LEAD; COPPER; CADMIUM; MERCURY; ARSENIC; BIOACCUMULATION; INDUSTRIAL POLLUTION; WATER POLLUTION; ADULTS
Larsson, A.; Haux, C.; Sjobeck, M.-L.; Lithner, G. 1984 Ecotoxicology and Environmental Safety 8:118-128

Tissue	Cases Exposure Route	Range	Mean	General Information
5382 Liver	a) 5 b) 4	a) Not given b) 215-1580 ug/g Dry wt	a) 154 ug/g b) Not given Dry wt	a) Upstream of metal inflow b) Downstream Ranges of means from 1 and 3 sampling areas, respectively Australia, Tasmania, South Esk River AAS

GILLS; MUSCLES; LIVER; FISHES; AUSTRALIA; CADMIUM; ZINC; COPPER; METALS; WATER POLLUTION; TASMANIA; AQUATIC; ENVIRONMENTAL EXPOSURE
Norris, R.H.; Lake, P.S. 1984 Bulletin of Environmental Contamination and Toxicology 33:348-354

Pintail
ANAS ACUTA

Tissue	Cases Exposure Route	Range	Mean	General Information
5383 Bone	14 Ingestion	106-212 ug/g Dry wt	140 ug/g Dry wt	Collected winters of 1976-77, 1979-80. Extensive interspecies variation. Chesapeake Bay AAS
5384 Kidney	5 Ingestion	64-86 ug/g Dry wt	74 ug/g Dry wt	Collected winters of 1976-77, 1979-80. Extensive interspecies variation. Chesapeake Bay AAS
5385 Liver	24 Ingestion	41-207 ug/g Dry wt	122 ug/g Dry wt	Collected winters of 1976-77, 1979-80. Extensive interspecies variation. Chesapeake Bay AAS

AQUATIC; CADMIUM; LEAD; COPPER; ZINC; LIVER; KIDNEYS; BONES; BIOLOGICAL MONITORING; UNITED STATES; BIOACCUMULATION; BIRDS; TERRESTRIAL; WATERFOWL; DUCKS; ENVIRONMENTAL EXPOSURE; DIETS; METALS
Giulio, R.T.; Scanlon, P.F. 1984 Environmental Pollution (Series A) 35:29-48

Zinc
7440-66-6
Zn
AtW 65.38, MP 419.5 C, BP 908 C, VP 1 mm Hg at 487 C, 10 mm Hg at 590 C

Pollock, walleye
THERAGRA CHALCOGRAMMA

Tissue	Cases Exposure Route	Range	Mean	General Information
5386 Muscle	Ingestion	a) Not given b) Not given c) Not given d) Not given	a) 3.086+/-0.410 ug/g b) 4.396+/-0.654 ug/g c) 4.179+/-0.531 ug/g d) 0.371+/-0.051 mg/100 g Wet wt	a) Caught in Bering Sea, AK, 20 fish, mean wt 965+/-352 g b) Shelik of Strait, AK, 10 fish, 1300+/-488 g c) Cape Ommaney, AK, 12 fish, 323+/-223 g. Site variations in levels. Pacific Ocean ES

FISHES; BIOLOGICAL MONITORING; PACIFIC OCEAN; ALUMINUM; BARIUM; CALCIUM; CHROMIUM; COPPER; IRON; MERCURY; POTASSIUM; LITHIUM; MAGNESIUM; MANGANESE; SODIUM; PHOSPHORUS; STRONTIUM; ZINC; AQUATIC; ENVIRONMENTAL EXPOSURE; WATER POLLUTION; FOOD CONTAMINATION; MUSCLES

Teeny, F.M.; Gauglitz, E.J., Jr.; Hall, A.S.; Houle, C.R. 1984 Journal of Agricultural and Food Chemistry 32:852-855

Pomfret
BRAMA JAPONICA

Tissue	Cases Exposure Route	Range	Mean	General Information
5387 Muscle	24 Ingestion	Not given	3.635+/-0.390 ug/g Wet wt	Gulf of Alaska. Mean body wt 1088+/-162 g. Pacific Ocean ES

FISHES; BIOLOGICAL MONITORING; PACIFIC OCEAN; ALUMINUM; BARIUM; CALCIUM; CHROMIUM; COPPER; IRON; MERCURY; POTASSIUM; LITHIUM; MAGNESIUM; MANGANESE; SODIUM; PHOSPHORUS; STRONTIUM; ZINC; AQUATIC; ENVIRONMENTAL EXPOSURE; WATER POLLUTION; FOOD CONTAMINATION; MUSCLES

Teeny, F.M.; Gauglitz, E.J., Jr.; Hall, A.S.; Houle, C.R. 1984 Journal of Agricultural and Food Chemistry 32:852-855

Raccoon
PROCYON LOTOR

Tissue	Cases Exposure Route	Range	Mean	General Information
5388 Kidney	4 Ingestion	Not given	29.5+/-10.5 ug/g	Undisturbed watershed. Specimens from fur trapper. Canada, Ontario, Georgian Bay, Tadenac Lake ES
5389 Liver	4 Ingestion	Not given	34.4+/-2.0 ug/g	Undisturbed watershed. Specimens from fur trapper. Canada, Ontario, Georgian Bay, Tadenac Lake ES
5390 Muscle	4 Ingestion	Not given	63.6+/-46.0 ug/g	Undisturbed watershed. Specimens from fur trapper. Canada, Ontario, Georgian Bay, Tadenac Lake ES

BEAVERS; OTTERS; RACCOONS; CANADA; BIOACCUMULATION; BIOMAGNIFICATION; SELENIUM; IRON; COPPER; CADMIUM; CALCIUM; ALUMINUM; MAGNESIUM; MANGANESE; SODIUM; NICKEL; PHOSPHORUS; ZINC; POTASSIUM; DETOXIFICATION; DIETS; LIVER; KIDNEYS; INTESTINES; MUSCLES; AQUATIC; TERRESTRIAL; ENVIRONMENTAL EXPOSURE; BIOLOGICAL MONITORING

Wren, C.D. 1984 Science of the Total Environment 34:177-184

Zinc
7440-66-6
Zn
AtW 65.38, MP 419.5 C, BP 908 C, VP 1 mm Hg at 487 C, 10 mm Hg at 590 C

Salmon
SALMO TRUTTO

Tissue	Cases Exposure Route	Range	Mean	General Information
5391 Gills	2	Not given	256 ug/g Dry wt	Upstream of metal inflow, one sampling area Australia, Tasmania, South Esk River AAS
5392 Liver	a) 2 b) 8	a) Not given b) Not given	a) 416 ug/g b) 349 ug/g Dry wt	a) Upstream of metal inflow b) Downstream 2 sampling areas Australia, Tasmania, South Esk River AAS
5393 Muscle	a) 12 b) 20	a) 18-131 ug/g b) 60-494 ug/g Dry wt	a) Not given b) Not given	a) Upstream of metal inflow b) Downstream Ranges of means from 3 and 4 sampling areas respectively Australia, Tasmania, South Esk River AAS

GILLS; MUSCLES; LIVER; FISHES; AUSTRALIA; CADMIUM; ZINC; COPPER; METALS; WATER POLLUTION; TASMANIA; AQUATIC; ENVIRONMENTAL EXPOSURE
Norris, R.H.; Lake, P.S. 1984 Bulletin of Environmental Contamination and Toxicology 33:348-354

Scaup, greater
AYTHYA MARILA

Tissue	Cases Exposure Route	Range	Mean	General Information
5394 Bone	11 Ingestion	112-192 ug/g Dry wt	150 ug/g Dry wt	Collected winters of 1976-77, 1979-80. Extensive interspecies variations. Chesapeake Bay AAS
5395 Kidney	11 Ingestion	62-97 ug/g Dry wt	75 ug/g Dry wt	Collected winters of 1976-77, 1979-80. Extensive interspecies variations. Chesapeake Bay AAS
5396 Liver	13 Ingestion	42-176 ug/g Dry wt	107 ug/g Dry wt	Collected winters of 1976-77, 1979-80. Extensive interspecies variations. Chesapeake Bay AAS

AQUATIC; CADMIUM; LEAD; COPPER; ZINC; LIVER; KIDNEYS; BONES; BIOLOGICAL MONITORING; UNITED STATES; BIOACCUMULATION; BIRDS; TERRESTRIAL; WATERFOWL; DUCKS; ENVIRONMENTAL EXPOSURE; DIETS; METALS
Giulio, R.T.; Scanlon, P.F. 1984 Environmental Pollution (Series A) 35:29-48

Zinc
7440-66-6
Zn
AtW 65.38, MP 419.5 C, BP 908 C, VP 1 mm Hg at 487 C, 10 mm Hg at 590 C

Scaup, lesser
AYTHYA AFFINIS

Tissue	Cases Exposure Route	Range	Mean	General Information
5397 Bone	36 Ingestion	130-253 ug/g Dry wt	176 ug/g Dry wt	Collected winters of 1976-77, 1979-80. Extensive interspecies variations. Chesapeake Bay AAS
5398 Kidney	67 Ingestion	23-155 ug/g dry wt	85 ug/g Dry wt	Collected winters of 1976-77, 1979-80. Extensive interspecies variations. Chesapeake Bay AAS
5399 Liver	70 Ingestion	35-251 ug/g Dry wt	104 ug/g Dry wt	Collected winters of 1976-77, 1979-80. Extensive interspecies variations. Chesapeake Bay AAS

AQUATIC; CADMIUM; LEAD; COPPER; ZINC; LIVER; KIDNEYS; BONES; BIOLOGICAL MONITORING; UNITED STATES; BIOACCUMULATION; BIRDS; TERRESTRIAL; WATERFOWL; DUCKS; ENVIRONMENTAL EXPOSURE; DIETS; METALS
Giulio, R.T.; Scanlon, P.F. 1984 Environmental Pollution (Series A) 35:29-48

Scoter, white-winged
MELANITTA FUSCA DEGLANDI

Tissue	Cases Exposure Route	Range	Mean	General Information
5400 Kidney	7 Ingestion	69-198 ug/g Dry wt	114 ug/g Dry wt	80% average recovery, data not corrected for recovery. Data pooled includes oldsquaws. Chesapeake Bay AAS
5401 Liver	57 Ingestion	48-527 ug/g Dry wt	159 ug/g Dry wt	80% average recovery, data not corrected for recovery. Data pooled includes oldsquaws. Chesapeake Bay AAS

AQUATIC; CADMIUM; LEAD; COPPER; ZINC; LIVER; KIDNEYS; BONES; BIOLOGICAL MONITORING; UNITED STATES; BIOACCUMULATION; BIRDS; TERRESTRIAL; WATERFOWL; DUCKS; ENVIRONMENTAL EXPOSURE; DIETS; METALS
Giulio, R.T.; Scanlon, P.F. 1984 Environmental Pollution (Series A) 35:29-48

Shad, American
ALOSA SAPIDISSIMA

Tissue	Cases Exposure Route	Range	Mean	General Information
5402 Muscle	13 Ingestion	Not given	3.792+/-0.359 ug/g Wet wt	New Seaside, OR. Mean wt 1039+/-251 g. Pacific Ocean ES

FISHES; BIOLOGICAL MONITORING; PACIFIC OCEAN; ALUMINUM; BARIUM; CALCIUM; CHROMIUM; COPPER; IRON; MERCURY; POTASSIUM; LITHIUM; MAGNESIUM; MANGANESE; SODIUM; PHOSPHORUS; STRONTIUM; ZINC; AQUATIC; ENVIRONMENTAL EXPOSURE; WATER POLLUTION; FOOD CONTAMINATION; MUSCLES
Teeny, F.M.; Gauglitz, E.J., Jr.; Hall, A.S.; Houle, C.R. 1984 Journal of Agricultural and Food Chemistry 32:852-855

Zinc
7440-66-6
Zn
AtW 65.38, MP 419.5 C, BP 908 C, VP 1 mm Hg at 487 C, 10 mm Hg at 590 C

Sheep
OVIS sp.

Tissue	Cases Exposure Route	Range	Mean	General Information
5403 Bone	a) 8 b) 8 c) 8 Ingestion	a) Not given b) Not given c) Not given	a) 53.88 ug/g b) 51.56 ug/g c) 47.38 ug/g Dry wt +/-2.96 S.E.	Lambs from ewes on basal diet fortified with cottonseed meal b) Lambs from ewes on basal diet plus 7% undigested sewage solids c) Lambs from ewes on basal diet. New Mexico AAS

KIDNEYS; LIVER; BONES; SHEEP; TERRESTRIAL; ENVIRONMENTAL EXPOSURE; DELIBERATE EXPOSURE; NEW MEXICO; CADMIUM; CHROMIUM; COPPER; IRON; MERCURY; NICKEL; LEAD; ZINC; METALS; ANIMAL FEEDS; AGRICULTURE; BIOACCUMULATION; BIOLOGICAL MONITORING; FARMS; FOOD CONTAMINATION; LAND POLLUTION; SEWAGE; CALCIUM; BLOOD SERUM; MAGNESIUM; POTASSIUM; PHOSPHORUS; SODIUM

Hudgens, R.E.; Hallford, D.M. 1984]utrition Reports International 29(1):11-21

Tissue	Cases Exposure Route	Range	Mean	General Information
5404 Kidney	a) 3 b) 2 c) 3 d) 2 e) 3 f) 2 Ingestion	a) 518-1030 mg/kg b) 2310-5892 mg/kg c) 848-952 mg/kg d) 1978-2660 mg/kg e) 204-527 mg/kg f) 1825-1868 mg/kg Dry wt	a) 782 mg/kg b) 4100 mg/kg c) 883 mg/kg d) 2319 mg/kg e) 347 mg/kg f) 1846 mg/kg Dry wt	a) Merino wethers. 731 mg/kg Zn oxide in feed b) 1481 mg/kg c) Southdown rams. 731 mg/kg Zn oxide in feed d) 1431 mg/kg e) Poll Dorset rams. 731 mg/kg Zn oxide in feed f) 1431 mg/kg Slaughtered after 40 d. Additional data available. Australia Pancreatic lesions, abomasal cell changes

URINE; KIDNEYS; PANCREAS; LIVER; ZINC; COPPER; SHEEP; TERRESTRIAL; DELIBERATE EXPOSURE; TRACE ELEMENTS; DRUGS

Ellis, T.M.; Masters, H.G.; Mayberry, C. 1984 Australian Veterinary Journal 61(9):296-298

Tissue	Cases Exposure Route	Range	Mean	General Information
5405 Kidney	a) 8 b) 8 c) 8 Ingestion	a) Not given b) Not given c) Not given	a) 71.06 ug/g b) 64.31 ug/g c) 65.81 ug/g Dry wt +/-3.81 S.E.	a) Lambs from ewes on basal diet fortified with cottonseed meal b) Lambs from ewes on basal diet plus 7% undigested sewage solids c) Lambs from ewes on basal diet. New Mexico AAS

KIDNEYS; LIVER; BONES; SHEEP; TERRESTRIAL; ENVIRONMENTAL EXPOSURE; DELIBERATE EXPOSURE; NEW MEXICO; CADMIUM; CHROMIUM; COPPER; IRON; MERCURY; NICKEL; LEAD; ZINC; METALS; ANIMAL FEEDS; AGRICULTURE; BIOACCUMULATION; BIOLOGICAL MONITORING; FARMS; FOOD CONTAMINATION; LAND POLLUTION; SEWAGE; CALCIUM; BLOOD SERUM; MAGNESIUM; POTASSIUM; PHOSPHORUS; SODIUM

Hudgens, R.E.; Hallford, D.M. 1984]utrition Reports International 29(1):11-21

Zinc
7440-66-6
Zn
AtW 65.38, MP 419.5 C, BP 908 C, VP 1 mm Hg at 487 C, 10 mm Hg at 590 C

Sheep
OVIS sp.

Tissue	Cases Exposure Route	Range	Mean	General Information
5406 Liver	a) 6 b) 6	a) 37-45 ug/g b) 22-48 ug/g Wet wt	a) 40+/-3.1 ug/g b) 35+/-8.8 ug/g Wet wt	a) Normal controls. Postmortem b) Chronic Cu poisoning No significant differences. Relative amount of soluble Cu & Zn-containing proteins was lower in homogenate from b). Oxidation in vivo of metal-binding proteins may cause observed decrease Sweden AAS
LIVER; SHEEP; ENVIRONMENTAL EXPOSURE; COPPER; ZINC				
Hussein, K.S.M.; Frank, A.; Jones, B.-E.V.; Edqvist, L.-E. 1984 Acta Pharmacologica et Toxicologica 55:247-251				

Tissue	Cases Exposure Route	Range	Mean	General Information
5407 Liver	a) 3 b) 2 c) 3 d) 2 e) 3 f) 2 Ingestion	a) 313-616 mg/kg b) 892-1888 mg/kg c) 302-527 mg/kg d) 912-1219 mg/kg e) 202-337 mg/kg f) 694-1008 mg/kg Dry wt	a) 456 mg/kg b) 1390 mg/kg c) 414 mg/kg d) 1065 mg/kg e) 265 mg/kg f) 851 mg/kg Dry wt	a) Merino wethers. 731 mg/kg Zn oxide in feed b) 1431 mg/kg c) Southdown rams. 731 mg/kg Zn oxide in feed d) 1431 mg/kg e) Poll Dorset rams. 731 mg/kg Zn oxide in feed f) 1431 mg/kg Slaughtered after 49 d. Additional data available. Australia Pancreatic lesions, abomasal cell changes
URINE; KIDNEYS; PANCREAS; LIVER; ZINC; COPPER; SHEEP; TERRESTRIAL; DELIBERATE EXPOSURE; TRACE ELEMENTS; DRUGS				
Ellis, T.M.; Masters, H.G.; Mayberry, C. 1984 Australian Veterinary Journal 61(9):296-298				

Tissue	Cases Exposure Route	Range	Mean	General Information
5408 Liver	a) 8 b) 8 c) 8 Ingestion	a) Not given b) Not given c) Not given	a) 83.44 ug/g b) 89.50 ug/g c) 83.31 Dry wt	a) Lambs from ewes on basal diet fortified with cottonseed meal b) Lambs from ewes on basal diet plus 7% undigested sewage solids c) Lambs from ewes on basal diet. New Mexico AAS
KIDNEYS; LIVER; BONES; SHEEP; TERRESTRIAL; ENVIRONMENTAL EXPOSURE; DELIBERATE EXPOSURE; NEW MEXICO; CADMIUM; CHROMIUM; COPPER; IRON; MERCURY; NICKEL; LEAD; ZINC; METALS; ANIMAL FEEDS; AGRICULTURE; BIOACCUMULATION; BIOLOGICAL MONITORING; FARMS; FOOD CONTAMINATION; LAND POLLUTION; SEWAGE; CALCIUM; BLOOD SERUM; MAGNESIUM; POTASSIUM; PHOSPHORUS; SODIUM				
Hudgens, R.E.; Hallford, D.M. 1984 Nutrition Reports International 29(1):11-21				

Zinc
7440-66-6
Zn
AtW 65.38,MP 419.5 C, BP 908 C,VP 1 mm Hg at 487 C, 10 mm Hg at 590 C

Sheep
OVIS sp.

Tissue	Cases Exposure Route	Range	Mean	General Information
5409 Pancreas	a) 3 b) 2 c) 3 d) 2 e) 3 f) 2 Ingestion	a) 334-588 mg/kg b) 1190-5389 mg/kg c) 585-971 mg/kg d) 3201-3510 mg/kg e) 116-228 mg/kg f) 909-1130 mg/kg Dry wt	a) 497 mg/kg b) 3290 mg/kg c) 729 mg/kg d) 3356 mg/kg e) 186 mg/kg f) 1019 mg/kg Dry wt	a) Merino wethers. 731 mg/kg Zn oxide in feed b) 1431 mg/kg c) Southdown rams. 731 mg/kg Zn oxide in feed d) 1431 mg/kg e) Poll Dorset rams. 731 mg/kg Zn oxide in feed f) 1431 mg/kg Slaughtered after 49 d. Additional data available. Australia Pancreatic lesions, abomasal cell changes
5410 Urine	a) 3 b) 11 Ingestion	a) Not given b) Not given	a) 1.7 mg/d b) 0.45 mg/d	a) 1431 mg/kg Zn oxide in feed b) 31 mg/kg Zn oxide in feed Merino wethers, Southdown rams, and Poll Dorset rams fed for 14 or 49 d Australia Pancreatic lesions, abomasal cell changes
URINE; KIDNEYS; PANCREAS; LIVER; ZINC; COPPER; SHEEP; TERRESTRIAL; DELIBERATE EXPOSURE; TRACE ELEMENTS; DRUGS				
Ellis, T.M.; Masters, H.G.; Mayberry, C. 1984 Australian Veterinary Journal 61(9):296-298				

Shell, wedge
DONAX SERRA

Tissue	Cases Exposure Route	Range	Mean	General Information
5411 Body		a) Not given b) Not given c) Not given d) Not given	a) 16.3+/-4.8 ug/g b) 17.3+/-4.8 ug/g c) 19.5+/-4.6 ug/g d) 20.5+/-3.8 ug/g Wet wt	a) Control b) 100 ug/L c) 250 ug/L d) 500 ug/L. 3-wk exposures to sublethal levels. South Africa
MOLLUSKS; AQUATIC; BODY; MANTLE; GILLS; DIGESTIVE GLAND; SYPHON; MUSCLES; GONADS; FOOT; ENVIRONMENTAL EXPOSURE; SOUTH AFRICA; ZINC; CADMIUM; COPPER; LEAD; NICKEL; COBALT; CHROMIUM; METALS; BIOINDICATORS; BIOACCUMULATION; BIOLOGICAL MONITORING; WATER POLLUTION				
Watling, H.R.; Watling, R.J. 1983 Bulletin of Environmental Contamination and Toxicology 31:339-343				

Zinc
7440-66-6
Zn
AtW 65.38,MP 419.5 C, BP 908 C,VP 1 mm Hg at 487 C, 10 mm Hg at 590 C
Silkworm
BOMBYX MORI

Tissue	Cases Exposure Route	Range	Mean	General Information
5412 Alimentary canal	Ingestion	a) Not given b) Not given	a) 383+/-73 ug/g b) 1000+/-65 ug/g Dry wt	a) Controls b) Treatment Larvae fed artificial diet containing none (controls), or 5 and 80 ug/ Cd/g wet diet from hatching to 4th instar and then for 5 d at 5th instar, respectively. Japan AAS
5413 Fat body	Ingestion	a) Not given b) Not given	a) 22.4+/-2.1 ug/g b) 23.8+/-0.9 ug/g Dry wt	a) Controls b) Treatment Larvae fed artificial diet containing none (controls), or 5 and 80 ug/ Cd/g wet diet from hatching to 4th instar and then for 5 d at 5th instar, respectively. Japan AAS
5414 Gonads	Ingestion	a) Not given b) Not given	a) 94.3 ug/g b) 104 ug/g Dry wt	a) Controls b) Treatment Larvae fed artificial diet containing none (controls), or 5 and 80 ug/ Cd/g wet diet from hatching to 4th instar and then for 5 d at 5th instar, respectively. Japan AAS
5415 Head	Ingestion	a) Not given b) Not given	a) 363+/-35 ug/g b) 369+/-35 ug/g Dry wt	a) Controls b) Treatment Larvae fed artificial diet containing none (controls), or 5 and 80 ug/ Cd/g wet diet from hatching to 4th instar and then for 5 d at 5th instar, respectively. Japan AAS
5416 Integument	Ingestion	a) Not given b) Not given	a) 51.8+/-1.9 ug/g b) 72.3+/-4.6 ug/g Dry wt	a) Controls b) Treatment Larvae fed artificial diet containing none (controls), or 5 and 80 ug/ Cd/g wet diet from hatching to 4th instar and then for 5 d at 5th instar, respectively. Japan AAS
5417 Malpighian tubes	Ingestion	a) Not given b) Not given	a) 79.9+/-4.2 ug/g b) 137+/-9 ug/g Dry wt	a) Controls b) Treatment Larvae fed artificial diet containing none (controls), or 5 and 80 ug/ Cd/g wet diet from hatching to 4th instar and then for 5 d at 5th instar, respectively. Japan AAS

(next page)

Zinc
7440-66-6
Zn
AtW 65.38,MP 419.5 C, BP 908 C,VP 1 mm Hg at 487 C, 10 mm Hg at 590 C

Silkworm
BOMBYX MORI

(continued)

Tissue	Cases Exposure Route	Range	Mean	General Information
5418 Silk gland	Ingestion	a) Not given b) Not given	a) 27.9+/-0.9 ug/g b) 29.0+/-3.4 ug/g Dry wt	a) Controls b) Treatment Larvae fed artificial diet containing none (controls), or 5 and 80 ug/ Cd/g wet diet from hatching to 4th instar and then for 5 d at 5th instar, respectively. Japan AAS
5419 Trachea	Ingestion	a) Not given b) Not given	a) 84.0+/-3.0 ug/g b) 128.0+/-36 ug/g Dry wt	a) Controls b) Treatment Larvae fed artificial diet containing none (controls), or 5 and 80 ug/ Cd/g wet diet from hatching to 4th instar and then for 5 d at 5th instar, respectively. Japan AAS

SILK GLAND; HEAD; TRACHEA; MALPIGHIAN TUBES; GASTROINTESTINAL TRACT; GONADS; FAT BODY; INTEGUMENT; DELIBERATE EXPOSURE; SILKWORMS; TERRESTRIAL; JAPAN; METAL POISONING; METALS; CADMIUM; ZINC; COPPER; CALCIUM; IRON; MAGNESIUM; MANGANESE; ALUMINUM; SODIUM; POTASSIUM; BIOACCUMULATION

Suzuki, K.T.; Aoki, Y.; Nishikawa, M.; Masui, H.; Matsubara, F. 1984 Comparative Biochemistry and Physiology 79C(2):249-253

Snail
BULLIA RHODOSTOMA

Tissue	Cases Exposure Route	Range	Mean	General Information
5420 Body	797	21.4-59.6 ug/g Wet wt	Not applicable	Collected 8/78-8/79 for national marine pollution monitoring program. Range of means. Higher levels in smaller individuals. South Africa

BODY; AQUATIC; ENVIRONMENTAL EXPOSURE; SOUTH AFRICA; METALS; ZINC; CADMIUM; COPPER; LEAD; IRON; MANGANESE; NICKEL; COBALT; CHROMIUM; BIOINDICATORS; BIOLOGICAL MONITORING; BIOACCUMULATION; WATER POLLUTION; MOLLUSKS

Watling, H.R.; Watling, R.J. 1983 Bulletin of Environmental Contamination and Toxicology 31:331-338

Zinc
7440-66-6
Zn
AtW 65.38,MP 419.5 C, BP 908 C,VP 1 mm Hg at 487 C, 10 mm Hg at 590 C

Snail, saltwater
NUCELLA LAPILLUS

Tissue	Cases Exposure Route	Range	Mean	General Information
5421 Body	40 Ingestion	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given	a) 153.8+/-39.1 ppm b) 261.0+/-63.7 ppm c) 331.0+/-95.2 ppm d) 207.4+/-68.1 ppm e) 443.4+/-109.7 ppm f) 382.8+/-58.3 ppm	a) Eastport, ME, large embayment b) Pemaquid Pt., ME, exposed coastal c) New Harbor, ME, close to marina and harbors, sheltered harbor d) Manomet, MA, large embayment e) Pt. Judith, RI, industrial effluents, marinas, coastal f) Avery Pt., CT, industrial and sewage effluents, marinas, river mouth. Pseudohermaphrodites (females with penis) common at c), e), f), polluted boating areas (94-100% frequency). Relatively unpolluted areas, no abnormalities a), b), d). Association with "imposex" frequency unclear. Levels high at e), low at a) but similar at b), c), d), f). Maine; Massachusetts; Rhode Island; Connecticut AAS

SNAILS; BODY; CADMIUM; ZINC; COPPER; CHROMIUM; IRON; AQUATIC; WATER POLLUTION; POPULATION EXPOSURE; SEX; MAINE; RHODE ISLAND; MASSACHUSETTS; CONNECTICUT; ENVIRONMENTAL EXPOSURE
Miller, E.R.; Pondick, J.S. 1984 Bulletin of Environmental Contamination and Toxicology 33:612-620

Sole, Dover
MICROSTOMUS PACIFICUS

Tissue	Cases Exposure Route	Range	Mean	General Information
5422 Muscle	Ingestion	a) Not given b) Not given c) Not given d) Not given	a) 3.428+/-0.752 ug/g b) 3.179+/-0.339 ug/g c) 5.056+/-0.638 ug/g d) 0.370+/-0.064 mg/100 g Wet wt	a) Caught near Newport, OR, 29 fish, mean wt 660+/-326 g b) Cape Ommaney, AK, 11 fish, 506+/-214 g c) Santa Cruz, CA, 10 fish, 212+/-68 g d) Overall mean, combined sites. Site variations in levels. Pacific Ocean ES

FISHES; BIOLOGICAL MONITORING; PACIFIC OCEAN; ALUMINUM; BARIUM; CALCIUM; CHROMIUM; COPPER; IRON; MERCURY; POTASSIUM; LITHIUM; MAGNESIUM; MANGANESE; SODIUM; PHOSPHORUS; STRONTIUM; ZINC; AQUATIC; ENVIRONMENTAL EXPOSURE; WATER POLLUTION; FOOD CONTAMINATION; MUSCLES
Teeny, F.M.; Gauglitz, E.J., Jr.; Hall, A.S.; Houle, C.R. 1984 Journal of Agricultural and Food Chemistry 32:852-855

Squid
TODARODES PACIFICUS

Tissue	Cases Exposure Route	Range	Mean	General Information
5423 Liver	3	51.3-63.7 ug/g Wet wt	57.5 ug/g Wet wt	Food of striped dolphin. Japan, Kawana, east Izu Peninsula; Japan, Taiji, southern Kii Peninsula AAS

(next page)

Zinc
7440-66-6
Zn
AtW 65.38,MP 419.5 C, BP 908 C,VP 1 mm Hg at 487 C, 10 mm Hg at 590 C

Squid
TODARODES PACIFICUS

(continued)

Tissue	Cases Exposure Route	Range	Mean	General Information
5424 Muscle	3	15.0-19.0 ug/g Wet wt	16.6 ug/g Wet wt	Food of striped dolphin. Japan, Kawana, east Izu Peninsula; Japan, Taiji, southern Kii Peninsula AAS

BODY; LIVER; MUSCLES; PANCREAS; LUNGS; HEART; SPLEEN; INTESTINES; STOMACH; KIDNEYS; BLOOD; ADIPOSE TISSUE; TESTES; OVARIES; SKIN; BONES; PLACENTA; MAMMARY GLANDS; MILK; MAMMALS; DOLPHINS; FISHES; SQUID; CADMIUM; ZINC; AQUATIC; ENVIRONMENTAL EXPOSURE; JAPAN; METALS; BIOINDICATORS; BIOLOGICAL MONITORING; BIOACCUMULATION; WATER POLLUTION

Honda, K.; Tatsukawa, R. 1983 Archives of Environmental Contamination and Toxicology 12:543-550

Starling
STURNUS VULGARIS

Tissue	Cases Exposure Route	Range	Mean	General Information
5425 Bone	10 Ingestion	215-264 mg/kg Dry wt	228+/-10.4 mg/kg Dry wt S.E.	Hg contaminated (1.11 mg/kg) commercial diet for 8 wk. Juveniles. Long bone. United Kingdom, Huntingdon AAS
5426 Gut	10 Ingestion	a) 100-134 mg/kg b) 99.3-168 mg/kg Dry wt	a) 116+/-5.2 mg/kg b) 127+/-7.8 mg/kg Dry wt S.E.	a) Fore-gut b) Hind-gut Hg-contaminated (1.11 mg/kg) commercial diet for 8 wk. Juveniles. United Kingdom, Huntingdon AAS
5427 Kidney	10 Ingestion	57-97 mg/kg Dry wt	71.9+/-3.2 mg/kg Dry wt S.E.	Hg contaminated (1.11 mg/kg) commercial diet for 8 wk. Juveniles. United Kingdom, Huntingdon AAS
5428 Liver	10 Ingestion	57.2-115 mg/kg Dry wt	87.9+/-5.9 mg/kg Dry wt S.E.	Hg contaminated (1.11 mg/kg) commercial diet for 8 wk. Juveniles. United Kingdom, Huntingdon AAS
5429 Muscle	9	a) 23.8-33.6 mg/kg b) 30.3-62.9 mg/kg Dry wt	a) 26.5+/-0.9 mg/kg b) 51.7+/-4.2 mg/kg Dry wt S.E.	a) Pectoral muscle, 9 cases b) Heart muscle, 5 cases Hg contaminated diet for 8 wk. Juveniles. United Kingdom, Huntingdon AAS
5430 Pancreas	10 Ingestion	100-159 mg/kg Dry wt	119+/-13.8 mg/kg Dry wt S.E.	Hg contaminated (1.11 mg/kg) commercial diet for 8 wk. Juveniles. United Kingdom, Huntingdon AAS

LIVER; KIDNEYS; GUT; PANCREAS; MUSCLES; BONES; TERRESTRIAL; BIRDS; UNITED KINGDOM; JUVENILES; METAL POISONING; MERCURY; ZINC; ACCIDENTAL POISONING; METALS; FOOD CONTAMINATION

Nicholson, J.K.; Osborn, D. 1984 Environmental Pollution (Series A-Ecological and Biological) 33:195-206

Zinc
7440-66-6
Zn
AtW 65.38,MP 419.5 C, BP 908 C,VP 1 mm Hg at 487 C, 10 mm Hg at 590 C
Stonefly
PLECOPTERA

Tissue	Cases Exposure Route	Range	Mean	General Information
5431 Body		a) 800-950 ppm b) 950-2975 ppm c) 1600-2750 ppm d) 500-620 ppm	a) Not given b) Not given c) Not given d) Not given	a) Controls during dry weather b) Controls during rain, only c) Station 2, which drains half of business district, during wet weather d) Station 3, which receives total cumulative runoff load from the city, during dry weather Additional data for Station 1, a control with an artificial substrate, and three weather regimes: dry, rain and snow/thaw (wet= rain and snow/thaw) Estimated from graph Massachusetts, Greenfield, Green River AAS

URBAN AREAS; WATER POLLUTION; BIOINDICATORS; COPPER; CADMIUM; ZINC; LEAD; INSECTS; AQUATIC; BENTHOS; BODY; MASSACHUSETTS; ENVIRONMENTAL EXPOSURE

Medeiros, C.; LeBlanc, R.; Coler, R.A. 1983 Environmental Toxicology and Chemistry 2:119-126

Zinc
7440-66-6
Zn
AtW 65.38, MP 419.5 C, BP 908 C, VP 1 mm Hg at 487 C, 10 mm Hg at 590 C

Sucker, northern hog
HYPENTELIUM NIGRICANS

Tissue	Cases Exposure Route	Range	Mean	General Information
5432 Body	12	78-111 ug/g Dry wt	89 ug/g Dry wt Median	Highway-contaminated stream. No positive correlation with total length. Sediment association influenced inter-specific variation. Virginia, Back Creek AAS
BODY; AQUATIC; VIRGINIA; CADMIUM; LEAD; NICKEL; ZINC; METALS; AIR POLLUTION; WATER POLLUTION; BIOACCUMULATION; BIOLOGICAL MONITORING; FISHES; BONES				
Ney, J.J.; Van Hassel, J.H. 1983 Archives of Environmental Contamination and Toxicology 12:701-706				

Sucker, white
CATOSTOMUS COMMERSONI

Tissue	Cases Exposure Route	Range	Mean	General Information
5433 Body	26	41-114 ug/g Dry wt	67 ug/g Dry wt Median	Highway-contaminated stream. No positive correlation with total length. Sediment association influenced inter-specific variation. Virginia, Back Creek AAS
BODY; AQUATIC; VIRGINIA; CADMIUM; LEAD; NICKEL; ZINC; METALS; AIR POLLUTION; WATER POLLUTION; BIOACCUMULATION; BIOLOGICAL MONITORING; FISHES; BONES				
Ney, J.J.; Van Hassel, J.H. 1983 Archives of Environmental Contamination and Toxicology 12:701-706				

Sunfish, redbreast
LEPOMIS AURIPUS

Tissue	Cases Exposure Route	Range	Mean	General Information
5434 Body	30	41-117 ug/g Dry wt	79 ug/g Dry wt Median	Highway-contaminated stream. No positive correlation with total length. Sediment association influenced inter-specific variation. Virginia, Back Creek AAS
BODY; AQUATIC; VIRGINIA; CADMIUM; LEAD; NICKEL; ZINC; METALS; AIR POLLUTION; WATER POLLUTION; BIOACCUMULATION; BIOLOGICAL MONITORING; FISHES; BONES				
Ney, J.J.; Van Hassel, J.H. 1983 Archives of Environmental Contamination and Toxicology 12:701-706				

Zinc
7440-66-6
Zn
AtW 65.38, MP 419.5 C, BP 908 C, VP 1 mm Hg at 487 C, 10 mm Hg at 590 C
Swine
SUS sp.

Tissue	Cases Exposure Route	Range	Mean	General Information
5435 Blood, plasma	12 Ingestion	a) 126.5+/-14.0-182+/-47.0 ug b) 93.3+/-17.6-166.0+/-33.5 ug c) Not given d) Not given e) Not given f) Not given g) Not given h) Not given i) Not given j) Not given k) Not given l) Not given /dl S.E.	a) Not given b) Not given c) 133.3+/-23.2 ug d) 98.8+/-11.4 ug e) 63.8+/-20.8 ug f) 59.0+/-12.9 ug g) 104.1+/-7.1 ug h) 130.1+/-12.5 ug i) 94.4+/-7.8 ug j) 96.4+/-10.5 ug k) 107.9+/-14.7 ug l) 67.3+/-11.2 ug /dl S.E.	a) 6 sows (controls), 86-113 d pregnancy, fed 2 kg/d semi-purified diet with 63 mg/kg Zn b) 6 sows (low Zn), 13 mg/kg Zn c) Controls, 7 d lactation d) 14 d e) Low Zn, 7 d lactation f) 14 d g) Piglets at birth, control sows h) 7 d i) 14 d j) Piglets at birth, low Zn sows k) 7 d l) 14 d Purebred Landrace sows, 20-41 mo old, multipara, wt 198-267 kg. Farrowing induced d 114. No wt difference controls and low Zn sows. Sows fed ad libitum after farrowing. Significant difference c) and e), d) and f), p<0.01, i) and l), p<0.05. Trend toward longer parturition in low Zn group. No differences in litter size, birth wt. No significant difference g) and j), p>0.05. Ranges of means. AAS
5436 Milk	12 Ingestion	a) Not given b) Not given c) Not given d) Not given	a) 22.3+/-2.0 ug b) 22.0+/-1.8 ug c) 7.16+/-0.72 ug d) 6.72+/-1.10 ug /dl S.E.	a) Colostrum from first nursing, 6 sows (controls) fed semi-purified diet with 63 mg/kg Zn b) Colostrum, 6 sows 13 mg/kg Zn (low Zn) c) Milk, 5-7 d after farrowing, controls d) Milk, 5-7 d after farrowing, low Zn No significant difference p>0.05. Purebred Landrace sows, 20-41 mo old, multipara. Protein content also measured. AAS

BLOOD PLASMA; MILK; TERRESTRIAL; DELIBERATE EXPOSURE; ADULTS; NEWBORN; ZINC; COPPER; IRON; AMMONIA; ANIMAL FEEDS; DIETS; LACTATION; PREGNANCY

Kalinowski, J.; Chaves, E.R. 1984 Canadian Journal of Animal Science 64:749-758

Zinc
7440-66-6
Zn
AtW 65.38, MP 419.5 C, BP 908 C, VP 1 mm Hg at 487 C, 10 mm Hg at 590 C

Swine
SUS sp.

Tissue	Cases Exposure Route	Range	Mean	General Information
5437 Milk	60 Ingestion	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given g) Not given h) Not given	a) 14.77 ug/ml b) 14.60 ug/ml c) 13.91 ug/ml d) 19.35 ug/ml e) 6.56 ug/ml f) 7.43 ug/ml g) 7.81 ug/ml h) 10.81 ug/ml	a) Colostrum, no dietary supplement b) Colostrum, 50 ppm Zn c) Colostrum, 500 ppm Zn d) Colostrum, 5000 ppm Zn e) After 3 wk of lactation, no dietary supplement f) After 3 wk of lactation, 50 ppm Zn g) After 3 wk of lactation, 500 ppm Zn h) After 3 wk of lactation, 5000 ppm Zn Crossbred and pure Yorkshire gilts, mean pretreatment wt 30 kg AAS

SWINE; COLOSTRUM; MILK; CALCIUM; COPPER; IRON; MAGNESIUM; MINERALS; PHOSPHORUS; ZINC; ANIMAL FEEDS; DIETS; LACTATION
Hill, G.M.; Miller, E.R.; Ku, P.K. 1983 Journal of Animal Science 57(1):123-129

Teal, green-winged
ANAS CRECCA CAROLINENSIS

Tissue	Cases Exposure Route	Range	Mean	General Information
5438 Liver	16 Ingestion	40-189 ug/g Dry wt	105 ug/g Dry wt	Collected winters of 1976-77, 1979-80. Extensive interspecies variation. Chesapeake Bay AAS

AQUATIC; CADMIUM; LEAD; COPPER; ZINC; LIVER; KIDNEYS; BONES; BIOLOGICAL MONITORING; UNITED STATES; BIOACCUMULATION; BIRDS; TERRESTRIAL; WATERFOWL; DUCKS; ENVIRONMENTAL EXPOSURE; DIETS; METALS
Giulio, R.T.; Scanlon, P.F. 1984 Environmental Pollution (Series A) 35:29-48

Tench
TINCA TINCA

Tissue	Cases Exposure Route	Range	Mean	General Information
5439 Gills	a) 4 b) 5	a) 78-93 ug/g b) 132-612 ug/g Dry wt	a) Not given b) Not given	a) Upstream of metal inflow b) Downstream Ranges of means from 2 areas each Australia, Tasmania, South Esk River AAS
5440 Liver	a) 4 b) 5	a) Not applicable b) 167-517 ug/g Dry wt	a) 87 ug/g b) Not given	a) Upstream of metal inflow b) Downstream Data, range of means and mean from 2 areas each Australia, Tasmania, South Esk River AAS

(next page)

Zinc
7440-66-6
Zn
AtW 65.38, MP 419.5 C, BP 908 C, VP 1 mm Hg at 487 C, 10 mm Hg at 590 C

Tench
TINCA TINCA

(continued)

Tissue	Cases Exposure Route	Range	Mean	General Information
5441 Muscle	a) 4 b) 5	a) 13-21 ug/g b) 44-322 ug/g Dry wt	a) Not applicable b) Not applicable	a) Upstream of metal inflow b) Downstream Ranges of means from 2 sampling areas each Australia, Tasmania, South Esk River AAS
GILLS; MUSCLES; LIVER; FISHES; AUSTRALIA; CADMIUM; ZINC; COPPER; METALS; WATER POLLUTION; TASMANIA; AQUATIC; ENVIRONMENTAL EXPOSURE				
Norris, R.H.; Lake, P.S. 1984 Bulletin of Environmental Contamination and Toxicology 33:348-354				

Trout, rainbow
SALMO GAIRDNERI

Tissue	Cases Exposure Route	Range	Mean	General Information
5442 Gills	31 Ingestion	a) 350-750 ug/g b) 800-1600 ug/g c) 600-1600 ug/g d) 700-1000 ug/g e) 382-1634 ug/g Dry wt	a) 550 ug/g b) 1250 ug/g c) 1150 ug/g d) 800 ug/g e) 1000 ug/g Dry wt	a) Age 0, 8 cases b) Age I, 11 cases c) Age II, 7 cases d) Age III, 5 cases e) Age 0-III, all 31 cases Caught in 1980-81. Washington AAS
5443 Liver	a) 10 b) 8 c) 3 d) 4 Ingestion	a) Not given b) Not given c) Not given d) Not given	a) 341+/-20 ug/g b) 484+/-56 ug/g c) 243+/-10 ug/g d) 219+/-28 ug/g Dry wt	a) Age I-II, 1973 b) Age I-II, 1980-81 c) Age III, 1973 d) Age III, 1980-81 Parent accumulated at early age. Fish not good biomonitors of metal pollution. Washington AAS
GILLS; LIVER; ENVIRONMENTAL EXPOSURE; FISHES; WASHINGTON; METAL POISONING; ZINC; INDUSTRIAL EMISSIONS; INDUSTRIAL POLLUTION; BIOACCUMULATION; AGE; ANIMAL POPULATIONS; HEALTH HAZARDS; WATER POLLUTION; BIOCONCENTRATION; AQUATIC				
Saltes, J.G.; Bailey, G.C. 1984 Bulletin of Environmental Contamination and Toxicology 32:233-237				

Zinc
7440-66-6
Zn
AtW 65.38, MP 419.5 C, BP 908 C, VP 1 mm Hg at 487 C, 10 mm Hg at 590 C

Whiting, Pacific
MERLUCCIUS PRODUCTUS

Tissue	Cases Exposure Route	Range	Mean	General Information
5444 Muscle	a) 20 b) 32 Ingestion	a) Not given b) Not given	a) 5.969+/-0.497 ug/g b) 3.052+/-0.569 ug/g Wet wt	a) Near Astoria, OR, mean wt 873+/-246 g b) Refrigerated 2 d in seawater, Astoria, OR, 937+/-227 g. Interspecies variations among 7 species studied. Pacific Ocean ES

FISHES; BIOLOGICAL MONITORING; PACIFIC OCEAN; ALUMINUM; BARIUM; CALCIUM; CHROMIUM; COPPER; IRON; MERCURY; POTASSIUM; LITHIUM; MAGNESIUM; MANGANESE; SODIUM; PHOSPHORUS; STRONTIUM; ZINC; AQUATIC; ENVIRONMENTAL EXPOSURE; WATER POLLUTION; FOOD CONTAMINATION; MUSCLES

Teeny, F.M.; Gauglitz, E.J., Jr.; Hall, A.S.; Houle, C.R. 1984 Journal of Agricultural and Food Chemistry 32:852-855

Wigeon, American
ANAS AMERICANA

Tissue	Cases Exposure Route	Range	Mean	General Information
5445 Bone	17 Ingestion	110-119 ug/g Dry wt	139 ug/g [sic] Dry wt	Collected winters of 1976-77, 1979-80. Extensive interspecies variation. Chesapeake Bay AAS
5446 Kidney	14 Ingestion	64-198 ug/g Dry wt	91 ug/g Dry wt	Collected winters of 1976-77, 1979-80. Extensive interspecies variation. Chesapeake Bay AAS
5447 Liver	37 Ingestion	57-296 ug/g Dry wt	160 ug/g Dry wt	Collected winters of 1976-77, 1979-80. Extensive interspecies variation. Chesapeake Bay AAS

AQUATIC; CADMIUM; LEAD; COPPER; ZINC; LIVER; KIDNEYS; BONES; BIOLOGICAL MONITORING; UNITED STATES; BIOACCUMULATION; BIRDS; TERRESTRIAL; WATERFOWL; DUCKS; ENVIRONMENTAL EXPOSURE; DIETS; METALS

Giulio, R.T.; Scanlon, P.F. 1984 Environmental Pollution (Series A) 35:29-48

1-Propanol, 3-nitro-
25182-84-7
C3-H7-N-O3
Cattle
BOS sp.

Tissue	Cases Exposure Route	Range	Mean	General Information
5448 Blood, plasma	4 Injection	a) 55-0 nmoles/ml b) 145-0 nmoles/ml c) 120-0 nmoles/ml d) 300-0 nmoles/ml e) 330-40 nmoles/ml f) 340-95 nmoles/ml g) 940-40 nmoles/ml h) 915-535 nmoles/ml	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given g) Not given h) Not given	a) 10 mg/kg IV, 0-60 min b) 3-nitropropionic acid (NPA), 0-90 min c) 20 mg/kg IV, 0-90 min d) NPA, 0-120 min e) 30 mg/kg IV, 0-90 min f) NPA, 0-120 min g) 40 mg/kg, 0-120 min h) NPA, 30-120 min Minutes post infusion. Estimated from graph. Herefords, 3 heifers, 238-384 kg. 1 steer, 288 kg. Collapse HPLC
BLOOD PLASMA; CATTLE; SHEEP; TERRESTRIAL; DELIBERATE EXPOSURE; METABOLISM; METABOLITES; POISONING; DRUGS				
Muir, A.D.; Majak, W.; Pass, M.A.; Yost, G.S. 1984 Toxicology Letters 20:137-141				

Sheep
OVIS sp.

Tissue	Cases Exposure Route	Range	Mean	General Information
5449 Blood, plasma	4 Injection	a) 65-0 nmoles/ml b) 75-0 nmoles/ml c) 150-0 nmoles/ml d) 100-20 nmoles/ml	a) Not given b) Not given c) Not given d) Not given	a) 10 mg/kg IV, 0-30 min b) 3-nitropropionic acid (NPA), 0-60 min c) 20 mg/kg IV, 0-60 min d) NPA, 0-120 min Time post-infusion. Estimated from graph. Suffolk ewes, 32-39 kg. HPLC
BLOOD PLASMA; CATTLE; SHEEP; TERRESTRIAL; DELIBERATE EXPOSURE; METABOLISM; METABOLITES; POISONING; DRUGS				
Muir, A.D.; Majak, W.; Pass, M.A.; Yost, G.S. 1984 Toxicology Letters 20:137-141				

1,1'-Biphenyl, 2,2',3,4,4',5,5'-heptabromo-
67733-52-2
C12-H3-Br7
Chicken, white leghorn
GALLUS sp.

Tissue	Cases Exposure Route	Range	Mean	General Information
5450 Body	a) 12 b) 12 c) 12 Ingestion	a) Not detectable b) Not detectable-0.4 ppm c) 0.27-0.47 ppm	a) 0 ppm b) 0.01+/-0.02 ppm c) 0.39+/-0.084 ppm	a) Controls b) 0.1 ppm c) 1.0 ppm 14 d after diet containing PCBs. Michigan GC
BODY; CHICKENS; TERRESTRIAL; DELIBERATE EXPOSURE; MICHIGAN; JUVENILES; NUTRITIONAL DISORDERS; BROMINATED HYDROCARBONS; POLYBROMINATED BIPHENYLS; ANIMAL FEEDS; BIOACCUMULATION; FOOD CONTAMINATION				
Polin, D.; Leavitt, R.A. 1984 Journal of Toxicology and Environmental Health 13:659-671				

1,1'-Biphenyl, 2,2',4,4',5,5'-hexabromo-
59080-40-9
C12-H4-Br6
MW 627.40, MP 72 C, VP 0.000076 mm Hg at 90 C
Chicken, white leghorn
GALLUS sp.

Tissue	Cases Exposure Route	Range	Mean	General Information
5451 Body	a) 12 b) 12 c) 12 d) 6 e) 6 f) 6 g) 6 Ingestion	a) Not detectable-0.01 ppm b) 0.10-0.12 ppm c) 0.74-1.00 ppm d) Not given e) Not given f) Not given g) Not given	a) 0 ppm b) 0.11+/-0.01 ppm c) 0.87+/-0.112 ppm d) 0.40 ug/g e) 0.64 ug/g f) 0.17 ug/g g) 0.34 ug/g	a) Controls b) 0.1 ppm c) 1.0 ppm d) Controls, 1.0 ppm, no colestipol e) Controls, 1.0 ppm, no colestipol, restricted energy f) 2.5% colestipol, 1.0 ppm g) 3.125% colestipol, 1.0 ppm, restricted energy Animals fed 0, 0.1, or 1.0 ppm PBBs for 14 d, then fed 0, 0.5-0.625%, or 2.5-3.125% colestipol for 21 d. Restricted energy diet contained 80% calories of unrestricted diet. Restricted diet and higher levels of colestipol enhanced removal of PCBs. Michigan GC
BODY; CHICKENS; TERRESTRIAL; DELIBERATE EXPOSURE; MICHIGAN; JUVENILES; NUTRITIONAL DISORDERS; BROMINATED HYDROCARBONS; POLYBROMINATED BIPHENYLS; ANIMAL FEEDS; BIOACCUMULATION; FOOD CONTAMINATION				
Polin, D.; Leavitt, R.A. 1984 Journal of Toxicology and Environmental Health 13:659-671				

1,1'-Biphenyl, 2,2',4,4',5,5'-hexachloro-
35065-27-1
C12-H4-Cl6
MW 361
Amphipod
GAMMARUS PSEUDOLIMNAEUS

Tissue	Cases Exposure Route	Range	Mean	General Information
5452 Body		a) Not given b) Not given c) Not given d) Not given	a) 4.5 ug/g b) 11.6 ug/g c) 13.6 ug/g d) 4.0 ug/g	a) Day 1 b) Day 30 c) Day 4 d) Day 60 Treatment phase a)-b) for 30 days at 100 ng/L, Depuration phase c)-d) for 60 days. Samples averaged across 4 seasons Uptake was biphasic, most rapid rate during initial 3 hrs. No increase as a result of mutiple exposures. No biomagnification. Samples collected on days 8, 16 and 30 of treatment phase and 4, 8, 16, 32 and 60 of depuration phase. Michigan Scintillation counting
BODY; FISHES; CRAYFISH; AMPHIPODS; SNAILS; MAYFLIES; EARTHWORMS; CLAMS; AQUATIC; DELIBERATE EXPOSURE; MICHIGAN; BIOACCUMULATION; POLYCHLORINATED BIPHENYLS; HERBICIDES; WATER POLLUTION				
Lynch, T.R.; Johnson, H.E.; Adams, W.J. 1982 Environmental Toxicology and Chemistry 1:179-192				

Clam
STROPHITIS RUGOSUS

Tissue	Cases Exposure Route	Range	Mean	General Information
5453 Body		Not given	0.35 ug/g	Day 30, Treatment phase for 30 days at 100 ng/L, Samples averaged across 4 seasons Uptake was biphasic, most rapid rate during initial 3 hrs. No increase as a result of mutiple exposures. No biomagnification. Samples collected on days 8, 16 and 30 of treatment phase and 4, 8, 16, 32 and 60 of depuration phase. Michigan Scintillation counting
BODY; FISHES; CRAYFISH; AMPHIPODS; SNAILS; MAYFLIES; EARTHWORMS; CLAMS; AQUATIC; DELIBERATE EXPOSURE; MICHIGAN; BIOACCUMULATION; POLYCHLORINATED BIPHENYLS; HERBICIDES; WATER POLLUTION				
Lynch, T.R.; Johnson, H.E.; Adams, W.J. 1982 Environmental Toxicology and Chemistry 1:179-192				

1,1'-Biphenyl, 2,3',4,4',5,5'-hexachloro-
35065-27-1
C12-H4-Cl6
MW 361
Crayfish
ORONECTES sp.

Tissue	Cases Exposure Route	Range	Mean	General Information
5454 Body		a) Not given b) Not given	a) 2.45 ug/g b) 4.24 ug/g	a) Day 16 b) Day 30 Treatment phase a)-b) for 30 days at 100 ng/L, Samples averaged across 4 seasons Uptake was biphasic, most rapid rate during initial 3 hrs. No increase as a result of mutiple exposures. No biomagnification. Samples collected on days 8, 16 and 30 of treatment phase and 4, 8, 16, 32 and 60 of depuration phase. Michigan Scintillation counting
BODY; FISHES; CRAYFISH; AMPHIPODS; SNAILS; MAYFLIES; EARTHWORMS; CLAMS; AQUATIC; DELIBERATE EXPOSURE; MICHIGAN; BIOACCUMULATION; POLY-CHLORINATED BIPHENYLS; HERBICIDES; WATER POLLUTION				
Lynch, T.R.; Johnson, H.E.; Adams, W.J. 1982 Environmental Toxicology and Chemistry 1:179-192				

Earthworm, aquatic
LUMBRICULIDAE

Tissue	Cases Exposure Route	Range	Mean	General Information
5455 Body		a) Not given b) Not given c) Not given d) Not given	a) 1.4 ug/g b) 2.9 ug/g c) 3.7 ug/g d) 1.5 ug/g	a) Day 4 b) Day 30 c) Day 8 Day 60 Treatment phase a)-b) for 30 days at 100 ng/L, Depuration phase c)-d) for 60 days. Samples averaged across 4 seasons Uptake was biphasic, most rapid rate during initial 3 hrs. No increase as a result of mutiple exposures. No biomagnification. Samples collected on days 8, 16 and 30 of treatment phase and 4, 8, 16, 32 and 60 of depuration phase. Michigan Scintillation counting
BODY; FISHES; CRAYFISH; AMPHIPODS; SNAILS; MAYFLIES; EARTHWORMS; CLAMS; AQUATIC; DELIBERATE EXPOSURE; MICHIGAN; BIOACCUMULATION; POLY-CHLORINATED BIPHENYLS; HERBICIDES; WATER POLLUTION				
Lynch, T.R.; Johnson, H.E.; Adams, W.J. 1982 Environmental Toxicology and Chemistry 1:179-192				

1,1'-Biphenyl, 2,2',4,4',5,5'-hexachloro-
35065-27-1
C12-H4-Cl6
MW 361
Mayfly
BAETIS sp.

Tissue	Cases Exposure Route	Range	Mean	General Information
5456 Body		a) Not given b) Not given c) Not given	a) 17.7 ug/g b) 37.7 ug/g c) 0.8 ug/g	a) Day 1 b) Day 30 c) Day 60 Treatment phase a)-b) for 30 days at 100 ng/L, Depuration phase c) for 60 days. Samples averaged across 4 seasons Uptake was biphasic, most rapid rate during initial 3 hrs. No increase as a result of mutiple exposures. No biomagnification. Samples collected on days 8, 16 and 30 of treatment phase and 4, 8, 16, 32 and 60 of depuration phase. Michigan Scintillation counting
BODY; FISHES; CRAYFISH; AMPHIPODS; SNAILS; MAYFLIES; EARTHWORMS; CLAMS; AQUATIC; DELIBERATE EXPOSURE; MICHIGAN; BIOACCUMULATION; POLYCHLORINATED BIPHENYLS; HERBICIDES; WATER POLLUTION Lynch, T.R.; Johnson, H.E.; Adams, W.J. 1982 Environmental Toxicology and Chemistry 1:179-192				

Sculpin, mottled
COTTUS BAIRDI

Tissue	Cases Exposure Route	Range	Mean	General Information
5457 Body		a) Not given b) Not given	a) 1.70 ug/g b) 2.87 ug/g	a) Day 16 b) Day 30 Treatment phase a)-b) for 30 days at 100 ng/L, Samples averaged across 4 seasons Uptake was biphasic, most rapid rate during initial 3 hrs. No increase as a result of mutiple exposures. No biomagnification. Samples collected on days 8, 16 and 30 of treatment phase and 4, 8, 16, 32 and 60 of depuration phase. Michigan Scintillation counting
BODY; FISHES; CRAYFISH; AMPHIPODS; SNAILS; MAYFLIES; EARTHWORMS; CLAMS; AQUATIC; DELIBERATE EXPOSURE; MICHIGAN; BIOACCUMULATION; POLYCHLORINATED BIPHENYLS; HERBICIDES; WATER POLLUTION Lynch, T.R.; Johnson, H.E.; Adams, W.J. 1982 Environmental Toxicology and Chemistry 1:179-192				

1,1'-Biphenyl, 2,2',4,4',5,5'-hexachloro-
35065-27-1
C12-H4-Cl6
MW 361

Snail (Hydrophobia)
HYDROPHOBIA sp.

Tissue	Cases Exposure Route	Range	Mean	General Information
5458 Body		a) Not given b) Not given c) Not given	a) 0.3 ug/g b) 23.7 ug/g c) 22.6 ug/g	a) Day 1 b) Day 30 c) Day 4 Treatment phase a)-b) for 30 days at 100 ng/L, Depuration phase c) for 60 days. Samples averaged across 4 seasons Uptake was biphasic, most rapid rate during initial 3 hrs. No increase as a result of mutiple exposures. No biomagnification. Samples collected on days 8, 16 and 30 of treatment phase and 4, 8, 16, 32 and 60 of depuration phase. Michigan Scintillation counting

BODY; FISHES; CRAYFISH; AMPHIPODS; SNAILS; MAYFLIES; EARTHWORMS; CLAMS; AQUATIC; DELIBERATE EXPOSURE; MICHIGAN; BIOACCUMULATION; POLYCHLORINATED BIPHENYLS; HERBICIDES; WATER POLLUTION
Lynch, T.R.; Johnson, H.E.; Adams, W.J. 1982 Environmental Toxicology and Chemistry 1:179-192

Snail (Physa)
PHYSA sp.

Tissue	Cases Exposure Route	Range	Mean	General Information
5459 Body		a) Not given b) Not given c) Not given d) Not given	a) 1.3 ug/g b) 5.0 ug/g c) 4.4 ug/g d) 1.0 ug/g	a) Day 1 b) Day 30 c) Day 4 d) Day 60 Treatment phase a)-b) for 30 days at 100 ng/L, Depuration phase c)-d) for 60 days. Samples averaged across 4 seasons Uptake was biphasic, most rapid rate during initial 3 hrs. No increase as a result of mutiple exposures. No biomagnification. Samples collected on days 8, 16 and 30 of treatment phase and 4, 8, 16, 32 and 60 of depuration phase. Michigan Scintillation counting

BODY; FISHES; CRAYFISH; AMPHIPODS; SNAILS; MAYFLIES; EARTHWORMS; CLAMS; AQUATIC; DELIBERATE EXPOSURE; MICHIGAN; BIOACCUMULATION; POLYCHLORINATED BIPHENYLS; HERBICIDES; WATER POLLUTION
Lynch, T.R.; Johnson, H.E.; Adams, W.J. 1982 Environmental Toxicology and Chemistry 1:179-192

1,1'-Biphenyl, 2,3',4,5'-tetrachloro-
41464-40-8
C12-H6-Cl4
MW 291.98
Chicken
GALLUS GALLUS

Tissue	Cases Exposure Route	Range	Mean	General Information
5460 Adipose	2 Ingestion	a) Not given b) Not given	a) 62.03 ug/g b) 58.49 ug/g Wet wt	a) Subcutaneous b) Peritoneal Data include metabolites and parent compound 7 d after C-14 labelled dose of 50 mg. 22 wk old White Shaver star cross laying hens, wt 1300-1400 g West Germany, Giessen Radiometry
5461 Bone marrow	2 Ingestion	Not given	28.57 ug/g Wet wt	Data include metabolites and parent compound 7 d after C-14 labelled dose of 50 mg. 22 wk old White Shaver star cross laying hens, wt 1300-1400 g West Germany, Giessen Radiometry
5462 Brain	2 Ingestion	Not given	0.69 ug/g Wet wt	Data include metabolites and parent compound 7 d after C-14 labelled dose of 50 mg. 22 wk old White Shaver star cross laying hens, wt 1300-1400 g West Germany, Giessen Radiometry
5463 Eggs	2 Ingestion	Not given	5.85 mg/yolk	Calculated from data. Cumulative excretion of original 50 mg C-14 labelled dose for 11 d. Data include metabolites and parent compound. 60% of radioactivity was metabolites. 22 wk old White Shaver star cross laying hens, wt 1300-1400 g. West Germany, Giessen Radiometry
5464 Heart	2 Ingestion	Not given	7.69 ug/g ug/g Wet wt	Data include metabolites and parent compound 7 d after C-14 labelled dose of 50 mg. 22 wk old White Shaver star cross laying hens, wt 1300-1400 g West Germany, Giessen Radiometry
5465 Intestine	2 Ingestion	Not given	23.41 ug/g Wet wt	Colon. Data include metabolites and parent compound 7 d after C-14 labelled dose of 50 mg. 22 wk old White Shaver star cross laying hens, wt 1300-1400 g West Germany, Giessen Radiometry
5466 Kidney	2 Ingestion	Not given	5.76 ug/g Wet wt	Data include metabolites and parent compound 7 d after C-14 labelled dose of 50 mg. 22 wk old White Shaver star cross laying hens, wt 1300-1400 g West Germany, Giessen Radiometry
5467 Liver	2 Ingestion	Not given	4.85 ug/g Wet wt	Data include metabolites and parent compound 7 d after C-14 labelled dose of 50 mg. 22 wk old White Shaver star cross laying hens, wt 1300-1400 g West Germany, Giessen Radiometry
5468 Lung	2 Ingestion	Not given	3.37 ug/g Wet wt	Data include metabolites and parent compound 7 d after C-14 labelled dose of 50 mg. 22 wk old White Shaver star cross laying hens, wt 1300-1400 g West Germany, Giessen Radiometry

(next page)

1,1'-Biphenyl, 2,2',4,5'-tetrachloro-
41464-40-8
C12-H6-Cl4
MW 291.98

Chicken
GALLUS GALLUS

(continued)

Tissue	Cases Exposure Route	Range	Mean	General Information
5469 Muscle	2 Ingestion	Not given	0.46 ug/g Wet wt	Data include metabolites and parent compound 7 d after C-14 labelled dose of 50 mg. 22 wk old White Shaver star cross laying hens, wt 1300-1400 g West Germany, Giessen Radiometry
5470 Ovary	2 Ingestion	Not given	18.57 ug/g Wet wt	Data include metabolites and parent compound 7 d after C-14 labelled dose of 50 mg. 22 wk old White Shaver star cross laying hens, wt 1300-1400 g West Germany, Giessen Radiometry
5471 Skin	2 Ingestion	Not given	12.25 ug/g Wet wt	Data include metabolites and parent compound 7 d after C-14 labelled dose of 50 mg. 22 wk old White Shaver star cross laying hens, wt 1300-1400 g West Germany, Giessen Radiometry
5472 Spleen	2 Ingestion	Not given	3.75 ug/g Wet wt	Data include metabolites and parent compound 7 d after C-14 labelled dose of 50 mg. 22 wk old White Shaver star cross laying hens, wt 1300-1400 g West Germany, Giessen Radiometry
5473 Stomach	2 Ingestion	Not given	2.10 ug/g Wet wt	Data include metabolites and parent compound 7 d after C-14 labelled dose of 50 mg. 22 wk old White Shaver star cross laying hens, wt 1300-1400 g West Germany, Giessen Radiometry

CHICKENS; GERMANY; EGGS; OVARIES; SPLEEN; ADIPOSE TISSUE; TERRESTRIAL; BRAIN; KIDNEYS; HEART; STOMACH; LUNGS; SKIN; COLON; MUSCLES; BONE MARROW; FOOD CONTAMINATION; POLYCHLORINATED BIPHENYLS; DELIBERATE EXPOSURE

Brunn, H. 1984 Food and Chemical Toxicology 22(8):689-691

1,1'-Biphenyl, 2,2',5,5'-tetrachloro-
35693-99-3
C12-H6-Cl4
MW 291.98
Trout, brook
SALVELINUS FONTINALIS

Tissue	Cases Exposure Route	Range	Mean	General Information
5474 Bile	5	0.63-1.94% % of dose	1.15+/-0.49% % of dose	After 48 hr exposure to 0.100 ug/l in water. Measured as [C-14]TCB. Wt 530-640 g. GC; Radiometry
5475 Blood	5	0.09-0.23% % of dose	0.17+/-0.06% % of dose	After 48 hr exposure to 0.100 ug/l in water. Measured as [C-14]TCB. Wt 530-640 g. GC; Radiometry

(next page)

1,1'-Biphenyl, 2,2',5,5'-tetrachloro-
35693-99-3
C12-H6-Cl4
MW 291.98

Trout, brook
SALVELINUS FONTINALIS

(continued)

Tissue	Cases Exposure Route	Range	Mean	General Information
5476 Body	5	89.82-101.98% % of dose	96.29+/-4.88% % of dose	After 48 hr exposure to 0.100 ug/l in water. Measured as [C-14]TCB. Wt 530-640 g. GC; Radiometry
5477 Urine	4	a) 0.19-0.46% b) 0.20-0.52% % of dose	a) 0.33+/-0.13% b) 0.36+/-0.14% % of dose	a) 24 hr b) 48 Exposure times to oil ug/l in water. Measured as [C-14]TCB. Wt 660-840 kg. GC; Radiometry
POLYCHLORINATED BIPHENYLS; FISHES; WATER POLLUTION; BILE; BLOOD; BODY; FECES; URINE; MEASUREMENT METHODS; AQUATIC; DELIBERATE EXPOSURE McKim, J.M.; Heath, E.M. 1983 Toxicology and Applied Pharmacology 68:177-187				

Trout, rainbow
SALMO GAIRDNERI

Tissue	Cases Exposure Route	Range	Mean	General Information
5478 Bile	4	0.09-1.42% % of dose	1.23+/-0.20% % of dose	After 48 hr exposure to 0.1 ug/l in water. Wt 660-840 kg [C-14]TCB. GC; Radiometry
5479 Blood	4	0.10-0.20% % of dose	0.14+/-0.05% % of dose	After 48 hr exposure to 0.1 ug/l in water. Wt 660-840 kg [C-14]TCB. GC; Radiometry
5480 Body	4	96.73-109.98% % of dose	103.62+/-5.43% % of dose	After 48 hr exposure to 0.1 ug/l in water. Wt 660-840 kg [C-14]TCB. GC; Radiometry
5481 Urine	4	a) 0.08-0.40% b) 0.26-0.68% % of dose	a) 0.36+/-0.19% b) 0.52+/-0.18% % of dose	a) 24 hr b) 48 hr Exposure times to 0.1 ug/l in water. Measured as [C-14]TCB. Wt 660-840 kg. GC; Radiometry
POLYCHLORINATED BIPHENYLS; FISHES; WATER POLLUTION; BILE; BLOOD; BODY; FECES; URINE; MEASUREMENT METHODS; AQUATIC; DELIBERATE EXPOSURE McKim, J.M.; Heath, E.M. 1983 Toxicology and Applied Pharmacology 68:177-187				

1,2,4,5-Tetrabromobenzene (No postings in CHEMLINE).
Trout, rainbow
SALMO GAIRDNERI

Tissue	Cases Exposure Route	Range	Mean	General Information
5482 Body	6	a) Not given b) Not given c) Not given d) Not given e) Not given	a) 0.10+/-0.03 ng/g b) 0.22+/-0.04 ng/g c) 0.36+/-0.07 ng/g d) 0.34+/-0.10 ng/g e) 0.55+/-0.18 ng/g	a) Day 8 b) Day 21 c) Day 38 d) Day 58 e) Day 90 Days held in flow-through tanks to determine bioconcentration factor 5 chemicals tested at low levels in mixtures with minimal interactive effects Water level 0.09+/-0.02 ng/L. Canada, Ontario GC-EC
BODY; TROUT; AQUATIC; DELIBERATE EXPOSURE; ONTARIO; CANADA; BROMINE ORGANIC COMPOUNDS; CHLORINE ORGANIC COMPOUNDS; BIOCONCENTRATION; FISHES; INDUSTRIAL POLLUTION; WATER POLLUTION				
Oliver, B.G.; Niimi, A.J. 1984 Environmental Toxicology and Chemistry 3:271-277				

1,3-Butadiene, 1,1,2,3,4,4-hexachloro-
87-68-3
C4-Cl6
MW 260.76, MP -21 C, BP 215 C
Trout, rainbow
SALMO GAIRDNERI

Tissue	Cases Exposure Route	Range	Mean	General Information
5488 Body		a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given g) Not given h) Not given i) Not given j) Not given	a) 0.09+/-0.05 ng/g b) 0.2+/-0.05 ng/g c) 0.08+/-0.02 ng/g d) 0.37+/-0.09 ng/g e) 0.59+/-0.19 ng/g f) 0.76+/-0.14 ng/g g) 14+/-0.8 ng/g h) 61+/-15 ng/g i) 63+/-10 ng/g j) 0.2 ng/g	a) Controls, day 0 b) Controls, day 34 c) Controls, day 119 d) 0.10+/-0.02 ng/L, day 8 e) day 69 f) day 119 g) 3.4+/-2.5 ng/L, day 7 h) day 43 i) day 105 j) Fish from Lake Ontario Water concentrations and exposure times d)-i). Hatchery reared, mean wt increase from 255 to 390 g during study a)-i). Mean wt j) 3100 g. Canada, Great Lakes, Gamaraska River GC-EC
CANADA; ADULTS; BODY; COMPARATIVE EVALUATIONS; CHLORINE ORGANIC COMPOUNDS; CHLOROBENZENES; BIOACCUMULATION; FISHES; WATER POLLUTION; AQUATIC; ENVIRONMENTAL EXPOSURE				
Oliver, B.G.; Niimi, A.J. 1983 Environmental Science Technology 17:287-291				

1,3,4-Metheno-1H-cyclobuta(cd)pentalene, 1,1a,2,2,3,3a,4,5,5,5a,5b,6-do decachlorooctahydro-
2385-85-5
C10-Cl12
MW 545.59, VP 6X10(E-6) mm Hg at 25 C

Cottonmouth
AGKISTRODON PISCIVOROUS

Tissue	Cases Exposure Route	Range	Mean	General Information
5484 Body	a) 2 b) 9 c) 1	a) Not detected-0.11 ppm b) Not detected-0.22 ppm c) Not given Wet wt	a) 0.03 ppm b) 0.10 pm c) 0.11 ppm Wet wt	a) Lake Providence, 4.3% lipids b) Lake Bruin, 2.5% lipids c) Lake St. John, 2.4% lipids Collected 6/15-9/25/80. Tertiary consumers, major foods are snakes, fish and frogs. Lakes acting as sumps. Louisiana GC

BODY; ENVIRONMENTAL EXPOSURE; LOUISIANA; CHLORINE ORGANIC COMPOUNDS; INSECTICIDES; BIOMAGNIFICATION; FISHES; AGRICULTURE; PESTICIDE RESIDUES; AQUATIC; TERRESTRIAL; BIRDS; SNAKES; FROGS; CRAYFISH

Niethammer, K.R.; White, D.H.; Baskett, T.S.; Sayre, M.W. 1984 Archives of Contamination and Toxicology 13:63-74

Duck, black
ANAS RUBRIPES

Tissue	Cases Exposure Route	Range	Mean	General Information
5485 Adipose	8	Not applicable	0.39 ug/g Wet wt	7 adults, 1 juvenile shot 10/79, 11/79 and 1/80. Subcutaneous fat. Detected in only 1 bird. No significant difference in levels due to age, sex or collection site among 5 total species. New York, Hudson River and Long Island GC-EC
5486 Brain	8	Not applicable	0.01 ug/g Wet wt	7 adults, 1 juvenile shot 10/79, 11/79 and 1/80. Detected in 3 birds (0.01 ug/g each). New York, Hudson River and Long Island GC-EC
5487 Liver	3	Not applicable	0.01 ug/g Wet wt	3 adults shot 10/79 and 1/80. Detected in only 1 bird. New York, Hudson River and Long Island GC-EC
5488 Muscle	8	Not applicable	0.01 ug/g Wet wt	7 adults, 1 juvenile shot 10/79, 11/79 and 1/80. Breast muscle. Detected in only 1 bird. New York, Hudson River and Long Island GC-EC

ADIPOSE TISSUE; BRAIN; BREAST; LIVER; MUSCLES; BIRDS; ENVIRONMENTAL EXPOSURE; NEW YORK; ADULTS; JUVENILES; SEX; COMPARATIVE EVALUATIONS; CHLORINATED HYDROCARBONS; CHLORINE ORGANIC COMPOUNDS; DDE; INSECTICIDES; POLYCHLORINATED BIPHENYLS; BIOACCUMULATION; PESTICIDE RESIDUES; WATERFOWL; AQUATIC

Kim, K.S.; Pastel, M.J.; Kim, J.S.; Stone, W.B. 1984 Archives of Environmental Contamination and Toxicology 13:373-381

1,3,4-Metheno-1H-cyclobuta(cd)pentalene, 1,1a,2,2,3,3a,4,5,5,5a,5b,6-do decachlorooctahydro-
2385-85-5
C10-Cl12
MW 545.59, VP 6X10(Σ-6) mm Hg at 25 C

Duck, mallard
ANAS PLATYRHYNCHOS

Tissue	Cases Exposure Route	Range	Mean	General Information
5489 Brain	10	Not applicable	0.01 ug/g Wet wt	9 adults, 1 juvenile shot 10/79. Detected in only 1 bird. New York, Hudson River area GC-EC
5490 Liver	12	Not applicable	0.02 ug/g Wet wt	9 adults, 3 juveniles shot 10/79. Detected in only 1 bird. New York, Hudson River area GC-EC
ADIPOSE TISSUE; BRAIN; BREAST; LIVER; MUSCLES; BIRDS; ENVIRONMENTAL EXPOSURE; NEW YORK; ADULTS; JUVENILES; SEX; COMPARATIVE EVALUATIONS; CHLORINATED HYDROCARBONS; CHLORINE ORGANIC COMPOUNDS; DDE; INSECTICIDES; POLYCHLORINATED BIPHENYLS; BIOACCUMULATION; PESTICIDE RESIDUES; WATERFOWL; AQUATIC				
Kim, K.S.; Pastel, M.J.; Kim, J.S.; Stone, W.B. 1984 Archives of Environmental Contamination and Toxicology 13:373-381				

Duck, white Pekin
ANAS PLATYRHYNCHOS DOMESTICUS

Tissue	Cases Exposure Route	Range	Mean	General Information
5491 Brain	1	Not applicable	0.02 ug/g Wet wt	Adult domestic bird sacrificed 10/79 New York, Westchester County GC-EC
5492 Liver	1	Not applicable	0.01 ug/g Wet wt	Adult domestic bird sacrificed 11/79 New York, Long Island GC-EC
ADIPOSE TISSUE; BRAIN; BREAST; LIVER; MUSCLES; BIRDS; ENVIRONMENTAL EXPOSURE; NEW YORK; ADULTS; JUVENILES; SEX; COMPARATIVE EVALUATIONS; CHLORINATED HYDROCARBONS; CHLORINE ORGANIC COMPOUNDS; DDE; INSECTICIDES; POLYCHLORINATED BIPHENYLS; BIOACCUMULATION; PESTICIDE RESIDUES; WATERFOWL; AQUATIC				
Kim, K.S.; Pastel, M.J.; Kim, J.S.; Stone, W.B. 1984 Archives of Environmental Contamination and Toxicology 13:373-381				

1,3,4-Metheno-1H-cyclobuta(cd)pentalene, 1,1a,2,2,3,3a,4,5,5,5a,5b,6-do decachlorooctahydro-
2385-85-5
C10-Cl12
MW 545.59, VP 6X10(E-6) mm Hg at 25 C

Eagle, bald
HALIAEETUS LEUCOCEPHALUS

Tissue	Cases Exposure Route	Range	Mean	General Information
5493 Eggs	69	a) Not applicable b) 0.04-0.29 ppm c) 0.03-0.44 ppm d) 0.05-0.09 ppm e) 0.08-0.09 ppm f) 0.02-0.59 ppm g) 0.35-0.46 ppm h) 0.02-0.24 ppm i) 0.01-1.00 ppm j) Not applicable k) 0.27-2.00 ppm Fresh wet wt	a) 0.05 ppm b) 0.13 ppm c) 0.09 ppm d) 0.07 ppm e) 0.09 ppm f) 0.20 ppm g) 0.40 ppm h) 0.11 ppm i) 0.29 ppm j) 0.10 ppm k) 0.87 ppm Fresh wet wt	a) AK, 1976, 1 egg b) MN, 1972, 1976-78, 7 eggs c) WI, 1976-79, 19 eggs d) MI, 1969, 1974, 1978, 4 eggs e) NY, 1977-78, 2 eggs f) ME, 1975-79, 9 eggs g) DE, 1977-78, 3 eggs h) MD, 1973, 1977-78, 10 eggs i) VA, 1976-77, 1979, 1 egg k) FL, 1976-77, 1979, 5 eggs In about half of eggs, only 1 from western state. Highest levels in FL. GE-EC; GC-MS; Silica gel chrom.

EGGS; EAGLES; BIRDS; ENVIRONMENTAL EXPOSURE; ALASKA; ARIZONA; CALIFORNIA; DELAWARE; FLORIDA; LOUISIANA; MAINE; MARYLAND; MICHIGAN; MINNESOTA; NEW YORK; OHIO; OREGON; VIRGINIA; WISCONSIN; UNITED STATES; CHLORINATED HYDROCARBONS; CHLORINE ORGANIC COMPOUNDS; DDD; DDE; DDT; DIELDRIN; HEXACHLOROBENZENE; INSECTICIDES; MERCURY; PESTICIDES; POLYCHLORINATED BIPHENYLS; BIOACCUMULATION; PESTICIDE RESIDUES; POPULATION EXPOSURE

Wiemeyer, S.N.; Lamont, T.G.; Bunck, C.M.; Sindelar, C.R.; Gramlich, F.J.; Fraser, J.D.; Byrd, M.A. 1984 Archives of Environmental Contamination and Toxicology 13:529-549

Gar, spotted
LEPISOSTEUS OCULATUS

Tissue	Cases Exposure Route	Range	Mean	General Information
5494 Body	a) 1 b) 1	a) Not given b) Not detected-0.08 ppm Wet wt	a) 0.03 ppm b) 0.03 ppm Wet wt	a) Lake Providence, 11.1% lipids b) Lake Bruin, 2.7% lipids Collected 6/15-9/25/80. Tertiary consumers, major foods are fish. Lakes acting as sumps. Louisiana GC

BODY; ENVIRONMENTAL EXPOSURE; LOUISIANA; CHLORINE ORGANIC COMPOUNDS; INSECTICIDES; BIOMAGNIFICATION; FISHES; AGRICULTURE; PESTICIDE RESIDUES; AQUATIC; TERRESTRIAL; BIRDS; SNAKES; FROGS; CRAYFISH

Niethammer, K.R.; White, D.H.; Baskett, T.S.; Sayre, M.W. 1984 Archives of Contamination and Toxicology 13:63-74

1,3,4-Metheno-1H-cyclobuta(cd)pentalene, 1,1a,2,2,3,3a,4,5,5,5a,5b,6-do decachlorooctahydro-
2385-85-5
C10-Cl12
MW 545.59, VP 6X10(E-6) mm Hg at 25 C

Goat

Tissue	Cases Exposure Route	Range	Mean	General Information
5495 Blood, whole	a) 2 b) 1 Ingestion	a) 0.15-0.08 ppm b) 0.17-0.08 ppm	a) Not applicable b) Not applicable	a) 14-70 d after 14 mg/kg. From d 14-30 diet included 5 g light mineral oil/100 g feed, d 30-46 no mineral oil, d 46-60 mineral oil, d 60-70 no mineral oil b) 14-70 d after 14 mg/kg. From d 32-46 diet included 5 g N-hexadecane/100 g feed No detectable differences when diet included liquid paraffins. Estimated from graph. Scintillation counting
5496 Milk	3 Ingestion	a) 0.60+/-0.38-0.21+/-0.04% b) Not given c) 1.5-0.7 ppm d) 1.0-0.5 ppm S.E.	a) Not applicable b) 14.6+/-1.32% c) Not applicable d) Not applicable S.E.	a) 1-14 d, 3 cases, % dose excreted/d, peak (3.27+/-0.8%) on d 3 b) Cumulative % dose excreted in 14 d, 3 cases c) 14-70 d, 2 cases, diet included mineral oil at specific periods d) 14-70 d, 1 case, diet included N-hexadecane 14 mg/kg, no significant differences when diet included liquid paraffins. Scintillation counting
5497 Urine	3 Ingestion	a) 0.034+/-0.012-0.029+/-0.008% b) Not given S.E.	a) Not applicable b) 0.41+/-0.02% S.E.	a) 1-14 d after 14 mg/kg, % dose excreted/d b) % dose excreted 14 d after 14 mg/kg 44% dose excreted in feces in 14 d. Scintillation counting

BLOOD; URINE; MILK; ADIPOSE TISSUE; GOATS; CATTLE; TERRESTRIAL; DELIBERATE EXPOSURE; DDE; LIPIDS; ANIMAL FEEDS; FOOD ADDITIVES; FOOD CONTAMINATION; DIETS; BIOACCUMULATION; LACTATION; PESTICIDE RESIDUES; PREGNANCY; RADIONUCLIDES

Rosman, K.; Rosman, T.; Smith, G.S. 1984 Bulletin of Environmental Contamination and Toxicology 32:27-36

Goldeneye
BUCEPHALA CLANGULA

Tissue	Cases Exposure Route	Range	Mean	General Information
5498 Liver	1	Not applicable	0.11 ug/g Wet wt	Juvenile collected 12/79 New York, Niagara River GC-EC

ADIPOSE TISSUE; BRAIN; BREAST; LIVER; MUSCLES; BIRDS; ENVIRONMENTAL EXPOSURE; NEW YORK; ADULTS; JUVENILES; SEX; COMPARATIVE EVALUATIONS; CHLORINATED HYDROCARBONS; CHLORINE ORGANIC COMPOUNDS; DDE; INSECTICIDES; POLYCHLORINATED BIPHENYLS; BIOACCUMULATION; PESTICIDE RESIDUES; WATERFOWL; AQUATIC

Kim, K.S.; Pastel, M.J.; Kim, J.S.; Stone, W.B. 1984 Archives of Environmental Contamination and Toxicology 13:373-381

1,3,4-Metheno-1H-cyclobuta(cd)pentalene, 1,1a,2,2,3,3a,4,5,5,5a,5b,6-do decachlorooctahydro-
2385-85-5
C10-Cl12
MW 545.59, VP 6X10(E-6) mm Hg at 25 C

Goldfish
CARASSIUS AURATUS

Tissue	Cases Exposure Route	Range	Mean	General Information
5499 Bile	8 Injection	a) Not given b) Not given c) Not given d) Not given	a) 7.96 ppm b) 13.12 ppm c) 17.61 ppm d) 33.83 ppm	a) 2 d, 2 cases b) 4 d, 2 cases c) 6 d, 2 cases d) 8 d, 2 cases After IP injection of 38.35 ug [C-14]-parent chemical. Scintillation counting
5500 Body, whole	56 Ingestion	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given g) Not given	a) 12.0% b) 22.4% c) 12.8% d) 7.1% e) 7.8% f) 4.0% g) 3.0% % C-14	a) 1 d, renewed exposure, 9 cases b) 8 d, renewed exposure, 12 cases c) 16 d, renewed exposure, 3 cases d) 1 d, static exposure, 6 cases e) 2 d, static exposure, 10 cases f) 4 d static exposure, 9 cases g) 16 d, static exposure, 10 cases In renewed exposure study, water/chemical was changed daily. Static study allowed parent to volatilize. Initial concentration was 10 ppb [C-14]-parent chemical. Scintillation counting
5501 Brain	8 Injection	a) Not given b) Not given c) Not given d) Not given	a) 0.30 ppm b) 0.15 ppm c) 0.10 ppm d) 0.06 ppm	a) 2 d, 2 cases b) 4 d, 2 cases c) 6 d, 2 cases d) 8 d, 2 cases After IP injection of 38.35 ug [C-14]-parent chemical. Scintillation counting
5502 Gills	8 Injection	a) Not given b) Not given c) Not given d) Not given	a) 0.21 ppm b) 0.41 ppm c) 0.38 ppm d) 0.27 ppm	a) 2 d, 2 cases b) 4 d, 2 cases c) 6 d, 2 cases d) 8 d, 2 cases After IP injection of 38.35 ug [C-14]-parent chemical. Scintillation counting
5503 Heart	8 Injection	a) Not given b) Not given c) Not given d) Not given	a) 1.40 ppm b) 3.36 ppm c) 1.03 ppm d) 0.96 ppm	a) 2 d, 2 cases b) 4 d, 2 cases c) 6 d, 2 cases d) 8 d, 2 cases After IP injection of 38.35 ug [C-14]-parent chemical. Scintillation counting
5504 Intestine	8 Injection	a) Not given b) Not given c) Not given d) Not given	a) 1.81 ppm b) 1.55 ppm c) 1.40 ppm d) 1.05 ppm	a) 2 d, 2 cases b) 4 d, 2 cases c) 6 d, 2 cases d) 8 d, 2 cases After IP injection of 38.35 ug [C-14]-parent chemical. Scintillation counting

(next page)

1,3,4-Metheno-1H-cyclobuta(cd)pentalene, 1,1a,2,2,3,3a,4,5,5,5a,5b,6-do decachlorooctahydro-
2385-85-5
C10-Cl12
MW 545.59, VP 6X10(E-6) mm Hg at 25 C

Goldfish
CARASSIUS AURATUS

(continued)

Tissue	Cases Exposure Route	Range	Mean	General Information
5505 Kidney	8 Injection	a) Not given b) Not given c) Not given d) Not given	a) 0.94 ppm b) 1.69 ppm c) 2.92 ppm d) 2.02 ppm	a) 2 d, 2 cases b) 4 d, 2 cases c) 6 d, 2 cases d) 8 d, 2 cases After IP injection of 38.35 ug [C-14]-parent chemical. Scintillation counting
5506 Liver	8 Injection	a) Not given b) Not given c) Not given d) Not given	a) 4.30 ppm b) 2.95 ppm c) 1.29 ppm d) 2.45 ppm	a) 2 d, 2 cases b) 4 d, 2 cases c) 6 d, 2 cases d) 8 d, 2 cases After IP injection of 38.35 ug [C-14]-parent chemical. Scintillation counting
5507 Ovary	2 Injection	Not given	0.66 ppm	Day 2 after IP injection of 38.35 ug [C-14]-parent chemical. Scintillation counting
5508 Pancreas	8 Injection	a) Not given b) Not given c) Not given d) Not given	a) 2.21 ppm b) 1.91 ppm c) 1.89 ppm d) 2.49 ppm	a) 2 d, 2 cases b) 4 d, 2 cases c) 6 d, 2 cases d) 8 d, 2 cases After IP injection of 38.35 ug [C-14]-parent chemical. Scintillation counting
5509 Spinal cord	8 Injection	a) Not given b) Not given c) Not given d) Not given	a) 0.21 ppm b) 0.12 ppm c) 0.19 ppm d) 0.14 ppm	a) 2 d, 2 cases b) 4 d, 2 cases c) 6 d, 2 cases d) 8 d, 2 cases After IP injection of 38.35 ug [C-14]-parent chemical. Scintillation counting
5510 Spleen	8 Injection	a) Not given b) Not given c) Not given d) Not given	a) 1.95 ppm b) 3.05 ppm c) 1.17 ppm d) 1.04 ppm	a) 2 d, 2 cases b) 4 d, 2 cases c) 6 d, 2 cases d) 8 d, 2 cases After IP injection of 38.35 ug [C-14]-parent chemical. Scintillation counting

(next page)

1,3,4-Metheno-1H-cyclobuta(cd)pentalene, 1,1a,2,2,3,3a,4,5,5,5a,5b,6-do decachlorooctahydro-
2385-85-5
C10-Cl12
MW 545.59, VP 6X10(E-6) mm Hg at 25 C

Goldfish
CARASSIUS AURATUS

(continued)

Tissue	Cases Exposure Route	Range	Mean	General Information
5511 Testis	6 Injection	a) Not given b) Not given c) Not given	a) 0.30 ppm b) 1.39 ppm c) 0.51 ppm	a) 4 d, 2 cases b) 6 d, 2 cases c) 8 d, 2 cases After IP injection of 38.35 ug [C-14]-parent chemical. Scintillation counting

BODY; LIVER; KIDNEYS; GILLS; BILE; INTESTINES; SCALES; BRAIN; SPINAL CORD; OVARIES; TESTES; HEART; MUSCLES; PANCREAS; SPLEEN; DELIBERATE EXPOSURE; CHLORINE ORGANIC COMPOUNDS; CHLORINATED HYDROCARBONS; FUNGICIDES; INSECTICIDES; BIOACCUMULATION; RADIONUCLIDES; METABOLITES; WATER POLLUTION; FISHES; AQUATIC
Podowski, A.A.; Khan, A.Q. 1984 Archives of Environmental Contamination and Toxicology 13:471-481

Heron, black-crowned night
NYCTICORAX NYCTICORAX

Tissue	Cases Exposure Route	Range	Mean	General Information
5512 Eggs	147	Not given	0.25 ppm	Collected between May 17 and June 1, 1979. Possible sources: nesting and feeding habitats, or migration routes and wintering grounds in Mexico. Colorado; Wyoming GC; EC

EGGS; BIRDS; ENVIRONMENTAL EXPOSURE; COLORADO; WYOMING; CHLORINE ORGANIC COMPOUNDS; DDD; DDE; DDT; DIELDRIN; HEPTACHLOR EPOXIDE; OXYCHLORDANE; NONACHLOR; HEXACHLOROBENZENE; HEXACHLOROCYCLOHEXANE; POLYCHLORINATED BIPHENYLS; ANIMAL POPULATIONS; BIOLOGICAL MONITORING; PESTICIDE RESIDUES; LAND POLLUTION; WATER POLLUTION; AQUATIC
McEwen, L.C.; Stafford, C.J.; Hensler, G.L 1984 Environmental Toxicology and Chemistry 3:367-376

Heron, green-backed
BUTORIDES STRIATUS

Tissue	Cases Exposure Route	Range	Mean	General Information
5513 Adipose	4 Ingestion	Not given	0.40 ppm Wet wt	Composite from birds shot in 1980. Residues linked to fish diet. Louisiana, Lake Providence GC; GC/MS

(next page)

1,3,4-Metheno-1H-cyclobuta(cd)pentalene, 1,1a,2,2,3,3a,4,5,5,5a,5b,6-do decachlorooctahydro-
2385-85-5
C10-Cl12
MW 545.59, VP 6X10(E-6) mm Hg at 25 C

Heron, green-backed
BUTORIDES STRIATUS

(continued)

Tissue	Cases Exposure Route	Range	Mean	General Information
5514 Body	a) 12 b) 14 Ingestion	a) Not detected-0.45 ppm b) Not detected-0.27 ppm Wet wt	a) 0.10 ppm b) 0.04 ppm Wet wt Geometric means	a) Adults, mean lipid 16.2%, 10 had detectable levels b) Immature, mean lipid 14.8%, 5 had detectable levels Collected (shot) in 1980. Beak, feet, wing tips, skin, GI tract removed before homogenization. Residues linked to fish diet. Louisiana, Lake Province, Lake Bruin, Lake St. John GC; GC/MS

CHLORINE ORGANIC COMPOUNDS; FISHES; LOUISIANA; PESTICIDE RESIDUES; BIOACCUMULATION; DIETS; ADIPOSE TISSUE; LIVER; MUSCLES; BRAIN; BIOLOGICAL MONITORING; ENVIRONMENTAL EXPOSURE; BIRDS; WATERFOWL; AQUATIC; TERRESTRIAL; WATER POLLUTION; DDD; DDE; DDT; DIELDRIN; POLYCHLORINATED BIPHENYLS
Niethammer, K.R.; Baskett, T.S.; White, D.H. 1984 Bulletin of Environmental Contamination and Toxicology 38:491-498

Tissue	Cases Exposure Route	Range	Mean	General Information
5515 Body	a) 7 b) 3 c) 5	a) Not detected-0.27 ppm b) Not detected-0.45 ppm c) Not detected-0.36 ppm Wet wt	a) 0.06 ppm b) 0.05 ppm c) 0.08 ppm Wet wt	a) Lake Providence, 11.4% lipids b) Lake Bruin, 12.9% lipids c) Lake St. John, 26.7% lipids Collected betw.en 6/15-9/25/80. Tertiary consumers, major foods are fish. Lakes acting as sumps. Immature birds are good monitors of contamination. Louisiana GC

BODY; ENVIRONMENTAL EXPOSURE; LOUISIANA; CHLORINE ORGANIC COMPOUNDS; INSECTICIDES; BIOMAGNIFICATION; FISHES; AGRICULTURE; PESTICIDE RESIDUES; AQUATIC; TERRESTRIAL; BIRDS; SNAKES; FROGS; CRAYFISH
Niethammer, K.R.; White, D.H.; Baskett, T.S.; Sayre, M.W. 1984 Archives of Contamination and Toxicology 13:63-74

Heron, little blue
EGRETTA CAERULEA

Tissue	Cases Exposure Route	Range	Mean	General Information
5516 Body	6 Ingestion	Not detected-0.51 ppm Wet wt	0.12 ppm Wet wt Geometric mean	Adults shot 1980, mean lipid 10.8%. Beak, feet, skin, wing tips and GI tracts removed before homogenization. Moderate residues linked to mixed diet of fish, crustaceans and insects. Louisana, Lake Providence, Lake Bruin, Lake St. John GC; GC/MS

CHLORINE ORGANIC COMPOUNDS; FISHES; LOUISIANA; PESTICIDE RESIDUES; BIOACCUMULATION; DIETS; ADIPOSE TISSUE; LIVER; MUSCLES; BRAIN; BIOLOGICAL MONITORING; ENVIRONMENTAL EXPOSURE; BIRDS; WATERFOWL; AQUATIC; TERRESTRIAL; WATER POLLUTION; DDD; DDE; DDT; DIELDRIN; POLYCHLORINATED BIPHENYLS
Niethammer, K.R.; Baskett, T.S.; White, D.H. 1984 Bulletin of Environmental Contamination and Toxicology 38:491-498

1,3,4-Metheno-1H-cyclobuta(cd)pentalene, 1,1a,2,2,3,3a,4,5,5,5a,5b,6-do decachlorooctahydro-
2385-85-5
C10-Cl12
MW 545.59, VP 6X10(E-6) mm Hg at 25 C

Heron, little blue
EGRETTA CAERULEA

Tissue	Cases Exposure Route	Range	Mean	General Information
5517 Body	a) 5 b) 1	a) Not detected-0.51 ppm b) Not detected-0.08 ppm Wet wt	a) 0.06 ppm b) 0.03 ppm Wet wt	a) Lake Bruin, 6.0% lipids b) Lake St. John, 18.2% lipids Collected 6/15-9/25/80. Tertiary consumer, major foods are small fish and invertebrates. Lakes acting as sumps. Louisiana GC

BODY; ENVIRONMENTAL EXPOSURE; LOUISIANA; CHLORINE ORGANIC COMPOUNDS; INSECTICIDES; BIOMAGNIFICATION; FISHES; AGRICULTURE; PESTICIDE RESIDUES; AQUATIC; TERRESTRIAL; BIRDS; SNAKES; FROGS; CRAYFISH

Niethammer, K.R.; White, D.H.; Baskett, T.S.; Sayre, M.W. 1984 Archives of Contamination and Toxicology 13:63-74

1,3,4-Metheno-1H-cyclobuta(cd)pentalene, 1,1a,2,2,3,3a,4,5,5,5a,5b,6-do decachlorooctahydro-
2385-85-5
C10-Cl12
MW 545.59, VP 6X10(E-6) mm Hg at 25 C

Heron, yellow-crowned night
NYCTICORAX VIOLACEUS

Tissue	Cases Exposure Route	Range	Mean	General Information
5518 Body	a) 4 b) 13 Ingestion	a) Not detected-0.12 ppm b) Not detected-0.07 ppm Wet wt	a) 0.04 ppm b) 0.03 ppm Wet wt Geometric means	a) Adult, 2 had detectable levels, mean lipid 18.7% b) Immature, 1 had detectable levels, mean lipid 8.6% Collected (shot) 1980. Beak, feet, skin, wing tips and GI tract removed before homogenization. Low residues linked to crayfish diet. Louisiana, Lake Providence, Lake Bruin, Lake St. John GC; GC/MS

CHLORINE ORGANIC COMPOUNDS; FISHES; LOUISIANA; PESTICIDE RESIDUES; BIOACCUMULATION; DIETS; ADIPOSE TISSUE; LIVER; MUSCLES; BRAIN; BIOLOGICAL MONITORING; ENVIRONMENTAL EXPOSURE; BIRDS; WATERFOWL; AQUATIC; TERRESTRIAL; WATER POLLUTION; DDD; DDE; DDT; DIELDRIN; POLYCHLORINATED BIPHENYLS
Niethammer, K.R.; Baskett, T.S.; White, D.H. 1984 Bulletin of Environmental Contamination and Toxicology 33:491-498

Tissue	Cases Exposure Route	Range	Mean	General Information
5519 Body	a) 2 b) 1	a) Not detected-0.07 ppm b) Not detected-0.12 ppm Wet wt	a) 0.03 ppm b) 0.05 ppm Wet wt	a) Lake Providence, 11.4% lipids b) Lake St. John, 17.4% lipids Collected 6/15-9/25/80. Secondary consumer. Lakes acting as sumps. Louisiana GC

BODY; ENVIRONMENTAL EXPOSURE; LOUISIANA; CHLORINE ORGANIC COMPOUNDS; INSECTICIDES; BIOMAGNIFICATION; FISHES; AGRICULTURE; PESTICIDE RESIDUES; AQUATIC; TERRESTRIAL; BIRDS; SNAKES; FROGS; CRAYFISH
Niethammer, K.R.; White, D.H.; Baskett, T.S.; Sayre, M.W. 1984 Archives of Contamination and Toxicology 13:63-74

Loon, common
GAVIA IMMER

Tissue	Cases Exposure Route	Range	Mean	General Information
5520 Adipose	37	Not given	28.5+/-22.2 ug/g Wet wt	Collected in 1974. Canada, Ontario, Kinoje Lake; Algonquin Park; Parry Sound GC
5521 Brain	a) 11 b) 38 c) 1	a) Not given b) Not given c) Not given	a) 0.07+/-0.61 ug/g b) 0.01+/-0.02 ug/g c) 1.40 ug/g Wet wt	a) Unknown condition, collected in 1969, 7.76+/-1.12% fat b) Healthy, collected in 1978-79, 6.16+/-0.59% fat c) Emaciated, collected in 1978-79, 7.13% fat. Canada, Ontario, Kinoje Lake; Algonquin Park; Parry Sound GC

(next page)

1,3,4-Metheno-1H-cyclobuta(cd)pentalene, 1,1a,2,2,3,3a,4,5,5,5a,5b,6-do decachlorooctahydro-
2385-85-5
C10-Cl12
MW 545.59, VP 6X10(E-6) mm Hg at 25 C

Loon, common
GAVIA IMMER

(continued)

Tissue	Cases Exposure Route	Range	Mean	General Information
5522 Embryos	a) 12 b) 19	a) Not given b) Not given	a) 0.49+/-0.65 ug/g b) 0.23+/-0.27 ug/g Wet wt	a) Collected in 1978 from Algonquin-Parry Sound b) In 1979-80 from same. Canada, Ontario, Kinoje Lake; Algonquin Park; Parry Sound GC
5523 Muscle	37	Not given	0.04+/-0.06 ug/g Wet wt	Collected in 1974. Canada, Ontario, Kinoje Lake; Algonquin Park; Parry Sound GC

EGGS; BRAIN; ADIPOSE TISSUE; LIVER; MUSCLES; FEATHERS; INTESTINES; EMBRYOS; DDT; DDE; DIELDRIN; HEPTACHLOR EPOXIDE; POLYCHLORINATED BIPHENYLS; HEXACHLOROBENZENE; MERCURY; CHLORINE ORGANIC COMPOUNDS; PESTICIDES; PESTICIDE RESIDUES; BIOINDICATORS; BIOLOGICAL MONITORING; BIOACCUMULATION; LUNGS; GIZZARD; BLOOD; HEART; KIDNEYS

Frank, R.; Lumsden, H.; Barr, J.F.; Braun, H.E. 1983 Archives of Environmental Contamination and Toxicology 12:641-654

Merganser, American
MERGUS MERGANSER

Tissue	Cases Exposure Route	Range	Mean	General Information
5524 Adipose	4	0.19-0.36 ug/g Wet wt	0.23 ug/g Wet wt	Adults collected 12/79. Subcutaneous fat. No significant difference in levels due to age, sex or collection site among 5 other species. New York, Niagara River GC-EC
5525 Brain	6	0.03-0.36 ug/g Wet wt	0.15 ug/g Wet wt	Adults collected 12/79 New York, Niagara River GC-EC
5526 Liver	5	0.17-0.57 ug/g Wet wt	0.25 ug/g Wet wt	Adults collected 12/79. Levels significantly higher than in mallard and black ducks. New York, Niagara River GC-EC
5527 Muscle	6	0.79-1.80 ug/g Wet wt	1.30 ug/g Wet wt	Adults collected 12/79. Breast muscle. Detected in 2 birds. Mean level highest of 4 tissues analyzed. New York, Niagara River GC-EC

ADIPOSE TISSUE; BRAIN; BREAST; LIVER; MUSCLES; BIRDS; ENVIRONMENTAL EXPOSURE; NEW YORK; ADULTS; JUVENILES; SEX; COMPARATIVE EVALUATIONS; CHLORINATED HYDROCARBONS; CHLORINE ORGANIC COMPOUNDS; DDE; INSECTICIDES; POLYCHLORINATED BIPHENYLS; BIOACCUMULATION; PESTICIDE RESIDUES; WATERFOWL; AQUATIC

Kim, K.S.; Pastel, M.J.; Kim, J.S.; Stone, W.B. 1984 Archives of Environmental Contamination and Toxicology 13:373-381

1,3,4-Metheno-1H-cyclobuta(cd)pentalene, 1,1a,2,2,3,3a,4,5,5,5a,5b,6-do decachlorooctahydro-
2385-85-5
C10-Cl12
MW 545.59, VP 6X10(E-6) mm Hg at 25 C

Merganser, hooded
LOPHODYTES CACULLATUS

Tissue	Cases Exposure Route	Range	Mean	General Information
5528 Adipose	1	Not applicable	0.39 ug/g Wet wt	Adult collected 12/79. Subcutaneous fat. Mean highest of 3 tissues analyzed. No significant difference in levels due to age, sex or collection site among 5 total species. New York, Niagara River GC-EC
5529 Liver	1	Not applicable	0.12 ug/g Wet wt	Adult collected 12/79 New York, Niagara River GC-EC
5530 Muscle	1	Not applicable	0.21 ug/g Wet wt	Adult collected 12/79. Breast muscle New York, Niagara River GC-EC

ADIPOSE TISSUE; BRAIN; BREAST; LIVER; MUSCLES; BIRDS; ENVIRONMENTAL EXPOSURE; NEW YORK; ADULTS; JUVENILES; SEX; COMPARATIVE EVALUATIONS; CHLORINATED HYDROCARBONS; CHLORINE ORGANIC COMPOUNDS; DDE; INSECTICIDES; POLYCHLORINATED BIPHENYLS; BIOACCUMULATION; PESTICIDE RESIDUES; WATERFOWL; AQUATIC

Kim, K.S.; Pastel, M.J.; Kim, J.S.; Stone, W.B. 1984 Archives of Environmental Contamination and Toxicology 13:373-381

Merganser, red-breasted
MERGUS SERRATOR

Tissue	Cases Exposure Route	Range	Mean	General Information
5531 Adipose	2	0.05-2.50 ug/g Wet wt	1.28 ug/g Wet wt	Adults collected 12/79. Subcutaneous fat. Mean highest of 4 tissues analysed. No significant difference in levels due to age, sex or collection site among 5 total species. New York, Niagara River GC-EC
5532 Brain	1	Not applicable	0.03 ug/g Wet wt	Adult collected 12/79 New York, Niagara River GC-EC

ADIPOSE TISSUE; BRAIN; BREAST; LIVER; MUSCLES; BIRDS; ENVIRONMENTAL EXPOSURE; NEW YORK; ADULTS; JUVENILES; SEX; COMPARATIVE EVALUATIONS; CHLORINATED HYDROCARBONS; CHLORINE ORGANIC COMPOUNDS; DDE; INSECTICIDES; POLYCHLORINATED BIPHENYLS; BIOACCUMULATION; PESTICIDE RESIDUES; WATERFOWL; AQUATIC

Kim, K.S.; Pastel, M.J.; Kim, J.S.; Stone, W.B. 1984 Archives of Environmental Contamination and Toxicology 13:373-381

1,3,4-Metheno-1H-cyclobuta(cd)pentalene, 1,1a,2,2,3,3a,4,5,5,5a,5b,6-do decachlorooctahydro-
2385-85-5
C10-Cl12
MW 545.59, VP 6X10(E-6) mm Hg at 25 C

Merganser, red-breasted
MERGUS SERRATOR

Tissue	Cases Exposure Route	Range	Mean	General Information
5533 Eggs	a) 40 b) 40	a) Not applicable b) Not applicable	a) 0.06 ppm b) 0.06 ppm Wet wt Geometric means	a) Randomly selected b) Unhatched Collected 1977, pairs from same nests analysed. Lake Michigan, northwestern islands GLC

EGGS; AQUATIC; BIRDS; WATERFOWL; ENVIRONMENTAL EXPOSURE; GREAT LAKES; BROMINATED HYDROCARBONS; CHLORINATED HYDROCARBONS; BROMINE ORGANIC COMPOUNDS; CHLORINE ORGANIC COMPOUNDS; DDE; DDT; DIELDRIN; HEPTACHLOR EPOXIDE; HEXACHLOROBENZENE; INSECTICIDES; MERCURY; NONACHLOR; OXYCHLORDANE; PESTICIDES; POLYBROMINATED BIPHENYLS; POLYCHLORINATED BIPHENYLS; BIOACCUMULATION
Haseltine, S.D.; Heinz, G.H.; Hensler, G.L.; Reichel, W.L. 1983 Environmental Pollution 32:211-232

Tissue	Cases Exposure Route	Range	Mean	General Information
5534 Liver	1	Not applicable	0.17 ug/g Wet wt	Adults collected 12/79. Levels significantly higher than in mallard and black ducks. New York, Niagara River GC-EC
5535 Muscle	1	Not applicable	0.01 ug/g Wet wt	Adult collected 12/79. Breast muscle New York, Niagara River GC-EC

ADIPOSE TISSUE; BRAIN; BREAST; LIVER; MUSCLES; BIRDS; ENVIRONMENTAL EXPOSURE; NEW YORK; ADULTS; JUVENILES; SEX; COMPARATIVE EVALUATIONS; CHLORINATED HYDROCARBONS; CHLORINE ORGANIC COMPOUNDS; DDE; INSECTICIDES; POLYCHLORINATED BIPHENYLS; BIOACCUMULATION; PESTICIDE RESIDUES; WATERFOWL; AQUATIC
Kim, K.S.; Pastel, M.J.; Kim, J.S.; Stone, W.B. 1984 Archives of Environmental Contamination and Toxicology 13:373-381

Scaup, greater
AYTHYA MARILA

Tissue	Cases Exposure Route	Range	Mean	General Information
5536 Adipose	4	0.13-0.38 ug/g Wet wt	0.26 ug/g Wet wt	3 adults, 1 juvenile collected 12/79 and 1/80. Subcutaneous fat. Detected in 2 birds. No significant difference in levels due to age, sex or collection site among 5 total species. New York, Long Island and Niagara River GC-EC
5537 Brain	4	Not applicable	0.04 ug/g Wet wt	3 adults, 1 juvenile collected 12/79 and 1/80. Detected in only 1 bird. New York, Long Island and Niagara River GC-EC

(next page)

1,3,4-Metheno-1H-cyclobuta(cd)pentalene, 1,1a,2,2,3,3a,4,5,5,5a,5b,6-do decachlorooctahydro-
2385-85-5
C10-Cl12
MW 545.59, VP 6X10(E-6) mm Hg at 25 C

Scaup, greater
AYTHYA MARILA

(continued)

Tissue	Cases Exposure Route	Range	Mean	General Information
5538 Liver	3	Not applicable	0.09 ug/g Wet wt	2 adults, 1 juvenile collected 12/79. Detected in only 1 bird. New York, Long Island and Niagara River GC-EC
5539 Muscle	4	Not applicable	0.14 ug/g Wet wt	3 adults, 1 juvenile collected 12/79 and 1/80. Breast muscle. New York, Long Island and Niagara River GC-EC

ADIPOSE TISSUE; BRAIN; BREAST; LIVER; MUSCLES; BIRDS; ENVIRONMENTAL EXPOSURE; NEW YORK; ADULTS; JUVENILES; SEX; COMPARATIVE EVALUATIONS; CHLORINATED HYDROCARBONS; CHLORINE ORGANIC COMPOUNDS; DDE; INSECTICIDES; POLYCHLORINATED BIPHENYLS; BIOACCUMULATION; PESTICIDE RESIDUES; WATERFOWL; AQUATIC

Kim, K.S.; Pastel, M.J.; Kim, J.S.; Stone, W.B. 1984 Archives of Environmental Contamination and Toxicology 13:373-381

Scoter, white-winged
MELANITTA DEGLANDI

Tissue	Cases Exposure Route	Range	Mean	General Information
5540 Liver	2	Not applicable	0.05 ug/g Wet wt	Adults shot 10/79. Detected in 1 bird. New York, Hudson River GC-EC
5541 Muscle	2	Not applicable	0.04 ug/g Wet wt	Adults shot 10/79. Breast muscle. Detected in 1 bird. New York, Hudson River GC-EC

ADIPOSE TISSUE; BRAIN; BREAST; LIVER; MUSCLES; BIRDS; ENVIRONMENTAL EXPOSURE; NEW YORK; ADULTS; JUVENILES; SEX; COMPARATIVE EVALUATIONS; CHLORINATED HYDROCARBONS; CHLORINE ORGANIC COMPOUNDS; DDE; INSECTICIDES; POLYCHLORINATED BIPHENYLS; BIOACCUMULATION; PESTICIDE RESIDUES; WATERFOWL; AQUATIC

Kim, K.S.; Pastel, M.J.; Kim, J.S.; Stone, W.B. 1984 Archives of Environmental Contamination and Toxicology 13:373-381

1,3,4-Metheno-1H-cyclobuta(cd)pentalene, 1,1a,2,2,3,3a,4,5,5,5a,5b,6-do decachlorooctahydro-
2385-85-5
C10-Cl12
MW 545.59, VP 6X10(E-6) mm Hg at 25 C

Snake, water
NERODIA sp.

Tissue	Cases Exposure Route	Range	Mean	General Information
5542 Body	a) 3 b) 1	a) Not detected-0.10 ppm b) Not detected-0.08 ppm Wet wt	a) 0.04 ppm b) 0.03 ppm Wet wt	a) Lake Bruin, 3.7% lipids b) Lake St. John, 6.6% lipids Collected 6/15-9/25/80. Tertiary consumers, major foods are fish and frogs. Lakes acting as sumps. Louisiana GC

BODY; ENVIRONMENTAL EXPOSURE; LOUISIANA; CHLORINE ORGANIC COMPOUNDS; INSECTICIDES; BIOMAGNIFICATION; FISHES; AGRICULTURE; PESTICIDE RESIDUES; AQUATIC; TERRESTRIAL; BIRDS; SNAKES; FROGS; CRAYFISH

Niethammer, K.R.; White, D.H.; Baskett, T.S.; Sayre. M.W. 1984 Archives of Contamination and Toxicology 13:63-74

1,3,4-Metheno-2H-cyclobuta(cd)pentalen-2-one, 1,1a,3,3a,4,5,5,5a,5b,6-decac hlorooctahydro-
143-50-0
C10-Cl10-O
MW 490.68, VP less than 3X10(E-7) mm Hg at 25 C

Eagle, bald
HALIAEETUS LEUCOCEPHALUS

Tissue	Cases Exposure Route	Range	Mean	General Information
5543 Eggs	21	a) 0.10-0.33 ppm b) 0.03-0.34 ppm c) 0.10-5.40 ppm Fresh wet wt	a) 0.24 ppm b) 0.10 ppm c) 1.08 ppm Fresh wet wt	a) DE, 1977-78, 3 eggs b) MD, 1977-78, 7 eggs c) VA, 1976-77, 1979, 11 eggs Analysed only eggs from Chesapeake Bay area. More frequent in VA (11 of 12 eggs) and DE (3 of 3) than in MD (7 of 12). Gas-liquid chromatography

EGGS; EAGLES; BIRDS; ENVIRONMENTAL EXPOSURE; ALASKA; ARIZONA; CALIFORNIA; DELAWARE; FLORIDA; LOUISIANA; MAINE; MARYLAND; MICHIGAN; MINNESOTA; NEW YORK; OHIO; OREGON; VIRGINIA; WISCONSIN; UNITED STATES; CHLORINATED HYDROCARBONS; CHLORINE ORGANIC COMPOUNDS; DDD; DDE; DDT; DIELDRIN; HEXACHLOROBENZENE; INSECTICIDES; MERCURY; PESTICIDES; POLYCHLORINATED BIPHENYLS; BIOACCUMULATION; PESTICIDE RESIDUES; POPULATION EXPOSURE

Wiemeyer, S.N.; Lamont, T.G.; Bunck, C.M.; Sindelar, C.R.; Gramlich, F.J.; Fraser, J.D.; Byrd, M.A. 1984 Archives of Environmental Contamination and Toxicology 13:529-549

1,3,4-Metheno-2H-cyclobuta(cd)pentalen-2-one, 1,1a,3,3a,4,5,5,5a,5b,6-decac hlorooctahydro-
143-50-0
C10-Cl10-O
MW 490.68, VP less than 3X10(E-7) mm Hg at 25 C

Swine
SUS sp.

Tissue	Cases Exposure Route	Range	Mean	General Information
5544 Bile	2 Injection	a) 0.5-1.4 ug/ml b) 1.5-2.0 ug/ml c) 0.8-1.5 ug/ml d) 0.7-0.8 ug/ml	a) Not given b) Not given c) Not given d) Not given	a) Day 35 after 40 mg/kg b) Day 31 after 80 mg/kg c) Day 35 after 40 mg/kg, alcohol metabolite d) Day 31 after 80 mg/kg, alcohol metabolite Estimated from graph Top of range hepatic bile, bottom river bile Weaned, wt 13 kg day 1, 27 kg day 31 Tremors, vomiting, unsteady gait. Recovery after 72 hr at low dose, 120 hr at high dose GO
5545 Blood, plasma	2 Injection	a) Not given b) Not given	a) 1.2 ug/ml b) 2.8 ug/ml	a) Day 35 after 40 mg/kg b) Day 31 after 80 mg/kg Estimated from graph Weaned, wt 13 kg day 1, 27 kg day 31 Tremors, vomiting, unsteady gait. Recovery after 72 hr at low dose, 120 hr at high dose GO
5546 Liver	2 Injection	a) Not given b) Not given	a) 25 ug/g b) 120 ug/g	a) Day 35 after 40 mg/kg b) Day 31 after 80 mg/kg Estimated from graph Weaned, wt 13 kg day 1, 27 kg day 31 Tremors, vomiting, unsteady gait. Recovery after 72 hr at low dose, 120 hr at high dose GO

PESTICIDES; METABOLITES; FECES; LIVER; SWINE; JUVENILES; BILE; BLOOD PLASMA

Soine, P.J.; Blanke, R.V.; Schwartz, C.C. 1983 Toxicology Letters 17:35-41

1,3,5-Tribromobenzene (No postings in CHEMLINE).

Trout, rainbow
SALMO GAIRDNERI

Tissue	Cases Exposure Route	Range	Mean	General Information
5547 Body	6	a) Not given b) Not given c) Not given d) Not given e) Not given	a) 0.28+/-0.11 ng/g b) 0.76+/-0.15 ng/g c) 1.4+/-0.2 ng/g d) 1.4+/-0.2 ng/g e) 1.7+/-0.29 ng/g	a) Day 8 b) Day 21 c) Day 38 d) Day 58 e) Day 90 Days held in flow-through tanks to determine bioconcentration factor 5 chemicals tested at low levels in mixtures with minimal interactive effects Water level 0.32+/-0.07 ng/L. Canada, Ontario GC-EC

BODY; TROUT; AQUATIC; DELIBERATE EXPOSURE; ONTARIO; CANADA; BROMINE ORGANIC COMPOUNDS; CHLORINE ORGANIC COMPOUNDS; BIOCONCENTRATION; FISHES; INDUSTRIAL POLLUTION; WATER POLLUTION
Oliver, B.G.; Niimi, A.J. 1984 Environmental Toxicology and Chemistry 3:271-277

1,4-Dichloronaphthalene (No postings in CHEMLINE).

Trout, rainbow
SALMO GAIRDNERI

Tissue	Cases Exposure Route	Range	Mean	General Information
5548 Body	6	a) Not given b) Not given c) Not given d) Not given e) Not given	a) 2.0+/-1.0 ng/g b) 4.2+/-0.62 ng/g c) 5.4+/-1.1 ng/g d) 7.2+/-1.5 ng/g e) 9.5+/-2.7 ng/g	a) Day 8 b) Day 21 c) Day 38 d) Day 58 e) Day 90 Days held in flow-through tanks to determine bioconcentration factor 5 chemicals tested at low levels in mixtures with minimal interactive effects Water level 1.7+/-0.68 ng/L. Canada, Ontario GC-EC

BODY; TROUT; AQUATIC; DELIBERATE EXPOSURE; ONTARIO; CANADA; BROMINE ORGANIC COMPOUNDS; CHLORINE ORGANIC COMPOUNDS; BIOCONCENTRATION; FISHES; INDUSTRIAL POLLUTION; WATER POLLUTION
Oliver, B.G.; Niimi, A.J. 1984 Environmental Toxicology and Chemistry 3:271-277

1,4:5,8-Dimethanonaphthalene, 1,2,3,4,10,10-hexachloro-1,4,4a,5,8,8a-hexahydro-, endo,exo- (8 CI) 1,4:5,8-Dimethanonaphthalene, 1,2,3,4,10,10-hexachloro-1,4,4a,5,8,8a-hexahydro-, (1alpha,4alpha,4abeta,5alpha,8alpha,8abeta)- (9 CI)
309-00-2
C12-H8-Cl6
MW 365.93, MP 104 C, VP 6X10(E-6) mm Hg at 25 C

Cattle
BOS sp.

Tissue	Cases Exposure Route	Range	Mean	General Information
5540 Adipose	1320 Ingestion	a) 0.04-0.03 ppm b) 96.0-95.7% c) 2.6-3.6% d) 0.7-0.7% e) 0.7-0%	a) Not applicable b) Not applicable c) Not applicable d) Not applicable e) Not applicable	a) 1972-1982, peak (0.10 ppm) 1975 b) % of samples 0-0.1 ppm, 1972-1982, trough (66.4%) 1975 c) % 0.11-0.2 ppm, 1972-1982, peak (23.8%) 1975 d) % 0.21-0.3 ppm, 1972-1982, peak (7.4%) 1975 e) % >0.31 ppm, 1972-1982, peak (2.8%) 1974 Residues included dieldrin, declined for 99.1-56.7% positive samples from 1970-1982. Illinois GC
ADIPOSE TISSUE; CATTLE; TERRESTRIAL; ILLINOIS; ENVIRONMENTAL EXPOSURE; ALDRIN; DIELDRIN; DDT; HEPTACHLOR EPOXIDE; LINDANE; ACCIDENTAL POISONING; BIOACCUMULATION; FOOD CONTAMINATION; PESTICIDE RESIDUES; CHLORINATED HYDROCARBONS				
Steffey, K.L.; Reynolds, J.D.; Petty, H.B. 1984 Journal of Environmental Science and Health B19(8&9):773-783				

Tissue	Cases Exposure Route	Range	Mean	General Information
5550 Milk	Ingestion	a) 0.04-0.07 ppm b) 0.08-0.09 ppm c) 0.09-0.09 ppm d) 0.09-0.07 ppm e) </=0.001 ppm	a) Not given b) Not given c) Not given d) Not given e) Not given	a) 1972 & 3 b) 1974 & 5 c) 1976 & 7 d) 1978 & 9 e) 1980 & 1 Range of yearly means. Composite samples from several farms. Data include metabolite dieldrin. Levels constant over 10 yr. In statewide monitoring for chlorinated hydrocarbon insecticides, percentage contaminated samples decreased over study period. Illinois GC/MS
INSECTICIDES; PESTICIDE RESIDUES; MILK; CATTLE; ILLINOIS; BIOLOGICAL MONITORING; BIOCONCENTRATION; ALDRIN; DIELDRIN; DDT; METABOLITES; HEPTACHLOR EPOXIDE; TERRESTRIAL; CHLORINATED HYDROCARBONS; ENVIRONMENTAL EXPOSURE; HEXACHLOROCYCLOHEXANE				
Steffey, K.L.; Mack, J.; MacMonegle, C.W.; Pettyl, H.B. 1984 Journal of Environmental Science and Health B19(1):49-65				

1,4:5,8-Dimethanonaphthalene, 1,2,3,4,10,10-hexachloro-1,4,4a,5,8,8a-hexahydro-, endo,exo- (8 CI) 1,4:5,8-Dimethanonaphthalene, 1,2,3,4,10,10-hexachloro-1,4,4a,5,8,8a-hexahydro-, (1alpha,4alpha,4abeta,5alpha,8alpha,8abeta)- (9 CI)
309-00-2
C12-H8-Cl6
MW 365.93, MP 104 C, VP 6X10(E-6) mm Hg at 25 C

Eagle, booted
HIERAETUS PENNATUS

Tissue	Cases Exposure Route	Range	Mean	General Information
5551 Eggs	3 Ingestion	Not given	0.002 ppm Wet wt	Collected in 1983. Spain GLC

EGGS; ENVIRONMENTAL EXPOSURE; SPAIN; ADULTS; METAL POISONING; DDE; DDD; DDT; DIELDRIN; HEXACHLOROCYCLOHEXANE; HEPTACHLOR EPOXIDE; ALDRIN; POLYCHLORINATED BIPHENYLS; MERCURY; LEAD; CADMIUM; COPPER; ZINC; BIOACCUMULATION; BIOCONCENTRATION; HEALTH HAZARDS; PESTICIDE RESIDUES; BIRDS; TERRESTRIAL

Gonzalez, M.J.; Hernandez, L.M.; Rico, M.C.; Baluja, G. 1984 Journal of Environmental Health and Science

Eagle, imperial
AQUILA HELIACA

Tissue	Cases Exposure Route	Range	Mean	General Information
5552 Eggs	a) 6 b) 3 c) 3 d) 10 Ingestion	a) Not given b) Not given c) Not given d) Not given	a) 0.012 ppm b) 0.002 ppm c) 0.011 ppm d) 0.005 ppm Wet wt	a) Collected 1980 b) 1981 c) 1982 d) 1983. Spain GLC

EGGS; ENVIRONMENTAL EXPOSURE; SPAIN; ADULTS; METAL POISONING; DDE; DDD; DDT; DIELDRIN; HEXACHLOROCYCLOHEXANE; HEPTACHLOR EPOXIDE; ALDRIN; POLYCHLORINATED BIPHENYLS; MERCURY; LEAD; CADMIUM; COPPER; ZINC; BIOACCUMULATION; BIOCONCENTRATION; HEALTH HAZARDS; PESTICIDE RESIDUES; BIRDS; TERRESTRIAL

Gonzalez, M.J.; Hernandez, L.M.; Rico, M.C.; Baluja, G. 1984 Journal of Environmental Health and Science

Hobby
FALCO SUBBUTEO

Tissue	Cases Exposure Route	Range	Mean	General Information
5553 Eggs	4 Ingestion	Not given	0.003 ppm Wet wt	Collected in 1983. Spain GLC

EGGS; ENVIRONMENTAL EXPOSURE; SPAIN; ADULTS; METAL POISONING; DDE; DDD; DDT; DIELDRIN; HEXACHLOROCYCLOHEXANE; HEPTACHLOR EPOXIDE; ALDRIN; POLYCHLORINATED BIPHENYLS; MERCURY; LEAD; CADMIUM; COPPER; ZINC; BIOACCUMULATION; BIOCONCENTRATION; HEALTH HAZARDS; PESTICIDE RESIDUES; BIRDS; TERRESTRIAL

Gonzalez, M.J.; Hernandez, L.M.; Rico, M.C.; Baluja, G. 1984 Journal of Environmental Health and Science

1,4:5,8-Dimethanonaphthalene, 1,2,3,4,10,10-hexachloro-1,4,4a,5,8,8a-hexahydro-, endo,exo- (8 CI) 1,4:5,8-Dimethanonaphthalene, 1,2,3,4,10,10-hexachloro-1,4,4a,5,8,8a-hexahydro-, (1alpha,4alpha,4abeta,5alpha,8alpha,8abeta)- (9 CI)
309-00-2
C12-H8-Cl6
MW 365.93, MP 104 C, VP 6X10(E-6) mm Hg at 25 C

Kite, black
MILVUS MIGRANS

Tissue	Cases Exposure Route	Range	Mean	General Information
5554 Eggs	4 Ingestion	Not given	0.002 ppm Wet wt	Collected in 1983. Spain GLC
EGGS; ENVIRONMENTAL EXPOSURE; SPAIN; ADULTS; METAL POISONING; DDE; DDD; DDT; DIELDRIN; HEXACHLOROCYCLOHEXANE; HEPTACHLOR EPOXIDE; ALDRIN; POLYCHLORINATED BIPHENYLS; MERCURY; LEAD; CADMIUM; COPPER; ZINC; BIOACCUMULATION; BIOCONCENTRATION; HEALTH HAZARDS; PESTICIDE RESIDUES; BIRDS; TERRESTRIAL				
Gonzales, M.J.; Hernandez, L.M.: Rico, M.C.; Baluja, G. 1984 Journal of Environmental Health and Science				

Kite, red
MILVUS MILVUS

Tissue	Cases Exposure Route	Range	Mean	General Information
5555 Eggs	a) 4 b) 2 Ingestion	a) Not given b) Not given	a) 0.006 ppm b) 0.001 ppm Wet wt	a) Collected 1981 b) 1983. Spain GLC
EGGS; ENVIRONMENTAL EXPOSURE; SPAIN; ADULTS; METAL POISONING; DDE; DDD; DDT; DIELDRIN; HEXACHLOROCYCLOHEXANE; HEPTACHLOR EPOXIDE; ALDRIN; POLYCHLORINATED BIPHENYLS; MERCURY; LEAD; CADMIUM; COPPER; ZINC; BIOACCUMULATION; BIOCONCENTRATION; HEALTH HAZARDS; PESTICIDE RESIDUES; BIRDS; TERRESTRIAL				
Gonzales, M.J.; Hernandez, L.M.; Rico, M.C.; Baluja, G. 1984 Journal of Environmental Health and Science				

Mackerel
SCOMBEROMORUS MUCULATUS

Tissue	Cases Exposure Route	Range	Mean	General Information
5556 Muscle	1	Not given	0.22 ppb Wet wt	Collected 1/81. Mexico (NW), Sonora, Yavaros lagoon system GC
CRUSTACEANS; MOLLUSKS; MUSCLES; CHLORINE ORGANIC COMPOUNDS; MEXICO; BODY; BIOACCUMULATION; FISHES; PESTICIDE RESIDUES; WATER POLLUTION; AQUATIC; ENVIRONMENTAL EXPOSURE				
Rosales, M.T.L.; Escalona, R.L. 1983 Bulletin of Environmental Contamination and Toxicology 30:456-463				

1,4:5,8-Dimethanonaphthalene, 1,2,3,4,10,10-hexachloro-1,4,4a,5,8,8a-hexahydro-, endo,exo- (8 CI) 1,4:5,8-Dimethanonaphthalene, 1,2,3,4,10,10-hexachloro-1,4,4a,5,8,8a-hexahydro-, (1alpha,4alpha,4abeta,5alpha,8alpha,8abeta)- (9 CI)
309-00-2
C12-H8-Cl6
MW 365.93, MP 104 C, VP 6X10(E-6) mm Hg at 25 C

Mullet, striped
MUGIL CEPHALUS

Tissue	Cases Exposure Route	Range	Mean	General Information
5557 Muscle	a) 3 b) 6	a) Not given b) Not given	a) 0.52 ppb b) 0.40 ppb Wet wt	a) Moron carit, 7/81 b) Yavaros, 4/81. Mexico (NW), Sonora, Yavaros lagoon system GC
CRUSTACEANS; MOLLUSKS; MUSCLES; CHLORINE ORGANIC COMPOUNDS; MEXICO; BODY; BIOACCUMULATION; FISHES; PESTICIDE RESIDUES; WATER POLLUTION; AQUATIC; ENVIRONMENTAL EXPOSURE Rosales, M.T.L.; Escalona, R.L. 1983 Bulletin of Environmental Contamination and Toxicology 30:456-463				

Puffin
FRATERCULA ARCTICA

Tissue	Cases Exposure Route	Range	Mean	General Information
5558 Uropygial gland	11 Ingestion	50-5132 ppb	1200 ppb	Collected at Hornoy 7/82. Norway GC
LIVER; BRAIN; UROPYGIAL GLAND; EGGS; WATERFOWL; AQUATIC; ENVIRONMENTAL EXPOSURE; NORWAY; ADULTS; JUVENILES; ALDRIN; DDE; HEXACHLOROBENZENE; POLYCHLORINATED BIPHENYLS; HEXACHLOROCYCLOHEXANE; DIELDRIN; PESTICIDES; BIOACCUMULATION; FOOD CONTAMINATION; WATER POLLUTION; INDUSTRIAL POLLUTION; PESTICIDE RESIDUES Ingebrigtsen, K.; Skaare, J.U.; Teigen, S.W. 1984 Journal of Toxicology and Environmental Health 14:813-828				

Robin
TURDUS MIGRATORIUS

Tissue	Cases Exposure Route	Range	Mean	General Information
5559 Brain	1	<0.0001-0.0052 ppm	0.0009 ppm	None in 5 birds (same species). Illinois, Vermilion and Shelby Counties GC-EC
ADIPOSE TISSUE; BRAIN; MUSCLES; LIVER; HEART; TERRESTRIAL; BIRDS; ENVIRONMENTAL EXPOSURE; ILLINOIS; CHLORINATED HYDROCARBONS; CHLORINE ORGANIC COMPOUNDS; DDE; DIELDRIN; HEPTACHLOR EPOXIDE; INSECTICIDES; PESTICIDES; POLYCHLORINATED BIPHENYLS; BIOACCUMULATION; FOOD CONTAMINATION; PESTICIDE RESIDUES Edwards, W.R.; Dusan, R.E.; Siemers, R.J. 1983 Bulletin of Environmental Contamination and Toxicology 31:407-414				

1,4:5,8-Dimethanonaphthalene, 1,2,3,4,10,10-hexachloro-1,4,4a,5,8,8a-hexahydro-, endo,exo- (8 CI) 1,4:5,8-Dimethanonaphthalene, 1,2,3,4,10,10-hexachloro-1,4,4a,5,8,8a-hexahydro-, (1alpha,4alpha,4abeta,5alpha,8alpha,8abeta)- (9 CI)
309-00-2
C12-H8-Cl6
MW 365.93, MP 104 C, VP 6X10(E-6) mm Hg at 25 C

Shrimp, white
PENAEUS VANAMEI

Tissue	Cases Exposure Route	Range	Mean	General Information
5560 Body	123	Not given	0.68 ppb Wet wt	Moron carit, 7/81. Mexico (NW), Sonora, Yavaros lagoon system GC
CRUSTACEANS; MOLLUSKS; MUSCLES; CHLORINE ORGANIC COMPOUNDS; MEXICO; BODY; BIOACCUMULATION; FISHES; PESTICIDE RESIDUES; WATER POLLUTION; AQUATIC; ENVIRONMENTAL EXPOSURE Rosales, M.T.L.; Escalona, R.L. 1983 Bulletin of Environmental Contamination and Toxicology 30:456-463				

Snake, water
NERODIA (NATRIX) RHOMBIFERA

Tissue	Cases Exposure Route	Range	Mean	General Information
5561 Adipose	14	0.01-0.02 ppm	Not given	Belle Helene site, collected between 1977 & 79. Residue detected in 2 of 14 snakes. Range of means. Louisiana, Mississippi River, near Baton Rouge GC-EC
5562 Liver	15	Not given	0.01 ppm	Thomas Point and Belle Helene sites, collected between 1977 & 79. Residue detected in 2 of 15. Range of means. Louisiana, Mississippi River, near Baton Rouge GC-EC
5563 Muscle	7	Not given	0.01 ppm	Belle Helene site, collected between 1977 & 79. Residue detected in 1 of 7. Louisiana, Mississippi River, near Baton Rouge GC-EC
ADIPOSE TISSUE; LIVER; MUSCLES; BODY; SNAKES; AQUATIC; ENVIRONMENTAL EXPOSURE; LOUISIANA; CHLORINE ORGANIC COMPOUNDS; LINDANE; ALDRIN; DIELDRIN; HEPTACHLOR EPOXIDE; HEXACHLOROBENZENE; DDT; DDE; DDE; POLYCHLORINATED BIPHENYLS; FISHES; AGRICULTURE; BIOMAGNIFICATION; BIOCONCENTRATION; PESTICIDE RESIDUES; WATER POLLUTION Sabourin, T.D.; Stickle, W.B.; Michot, C.E.; Garton, D.W.; Mushinsky, H.R. 1984 Bulletin of Environmental Contamination and Toxicology 32:460-468				

1,4:5,8-Dimethanonaphthalene, 1,2,3,4,10,10-hexachloro-6,7-epoxy-1,4,4a,5,6,7,8,8a-octahydro-, endo,endo- (8 CI) 2,7:3,6-Dimethanonaphth(2,3-b)oxirene, 3,4,5,6,9,9-hexachloro-1a,2,2a,3,6,6a,7,7a-octahydro-, (1aalpha,2beta,2abeta,3alpha,6alpha,6abeta,7beta,7aalpha)- (9 CI)
72-20-8
C12-H8-Cl6-O
MW 380.9, MP 200 C (decomp), also reported as 245 C (decomp)

Clam
MEGAPITARIA SQUALIDA

Tissue	Cases Exposure Route	Range	Mean	General Information
5564 Body	16	Not given	3.23 ppb Wet wt	Collected 7/80. Mexico (NW), Sonora, Yavaros lagoon system GC
CRUSTACEANS; MOLLUSKS; MUSCLES; CHLORINE ORGANIC COMPOUNDS; MEXICO; BODY; BIOACCUMULATION; FISHES; PESTICIDE RESIDUES; WATER POLLUTION; AQUATIC; ENVIRONMENTAL EXPOSURE				
Rosales, M.T.L.; Escalona, R.L. 1983 Bulletin of Environmental Contamination and Toxicology 30:456-463				

Clam, Asiatic
CORBICULA MANILENSIS

Tissue	Cases Exposure Route	Range	Mean	General Information
5565 Body, whole	9	<0.1-0.4 ug/kg Dry wt	<0.1 ug/kg Dry wt Median	Trend in concentration increase from inorganic to organic to living material. August 1979-May 1980, sampling dates. Non-point sources. No significant seasonal, temporal or spatial variability reported. Florida, Apalachicola River GC-EC
BODY; ASIATIC CLAM; AQUATIC; ENVIRONMENTAL EXPOSURE; FLORIDA; TRACE ELEMENTS; PESTICIDES; POLYCHLORINATED BIPHENYLS; CHROMIUM; COPPER; LEAD; MANGANESE; MERCURY; ZINC; DDD; ORGANOPHOSPHATES; DDE; DDT; DIELDRIN; HEPTACHLOR EPOXIDE; INSECTICIDES; GEOLOGY				
Elder, J.F.; Mattraw, H.C. 1984 Archives of Environmental Contamination and Toxicology 13:453-469				

Coot, American
FULICA AMERICANA

Tissue	Cases Exposure Route	Range	Mean	General Information
5536 Body	1	Not detected-0.12 ppm Wet wt	0.04 ppm Wet wt	Lake Providence, 10.6% lipids. Collected 2/80. Secondary consumers. Lakes acting as sumps. Louisiana GC
BODY; ENVIRONMENTAL EXPOSURE; LOUISIANA; CHLORINE ORGANIC COMPOUNDS; INSECTICIDES; BIOMAGNIFICATION; FISHES; AGRICULTURE; PESTICIDE RESIDUES; AQUATIC; TERRESTRIAL; BIRDS; SNAKES; FROGS; CRAYFISH				
Niethammer, K.R.; White, D.H.; Baskett, T.S.; Sayre, M.W. 1984 Archives of Contamination and Toxicology 13:63-74				

1,4:5,8-Dimethanonaphthalene, 1,2,3,4,10,10-hexachloro-6,7-epoxy-1,4,4a,5,6,7,8,8a-octahydro-, endo,endo- (8 CI) 2,7:3,6-Dimethanonaphth(2,3-b)oxirene, 3,4,5,6,9,9-hexachloro-1a,2,2a,3,6,6a,7,7a-octahydro-, (1aalpha,2beta,2abeta,3alpha,6alpha,6abeta,7beta,7aalpha)- (9 CI)
72-20-8
C12-H8-Cl6-O
MW 380.9, MP 200 C (decomp), also reported as 245 C (decomp)

Eagle, bald
HALIAEETUS LEUCOCEPHALUS

Tissue	Cases Exposure Route	Range	Mean	General Information
5567 Eggs	4	a) 0.01-0.19 ppm b) Not applicable Fresh wet wt	a) 0.11 ppm b) 0.06 ppm Fresh wet wt	a) WI, 1976, 1978, 3 eggs b) DE, 1978, 1 egg GE-EC; GC-MS; Silica gel chrom.

EGGS; EAGLES; BIRDS; ENVIRONMENTAL EXPOSURE; ALASKA; ARIZONA; CALIFORNIA; DELAWARE; FLORIDA; LOUISIANA; MAINE; MARYLAND; MICHIGAN; MINNESOTA; NEW YORK; OHIO; OREGON; VIRGINIA; WISCONSIN; UNITED STATES; CHLORINATED HYDROCARBONS; CHLORINE ORGANIC COMPOUNDS; DDD; DDE; DDT; DIELDRIN; HEXACHLOROBENZENE; INSECTICIDES; MERCURY; PESTICIDES; POLYCHLORINATED BIPHENYLS; BIOACCUMULATION; PESTICIDE RESIDUES; POPULATION EXPOSURE

Wiemeyer, S.N.; Lamont, T.G.; Bunck, C.M.; Sindelar, C.R.; Gramlich, F.J.; Fraser, J.D.; Byrd, M.A. 1984 Archives of Environmental Contamination and Toxicology 13:529-549

Gar, spotted
LEPISOSTEUS OCULATUS

Tissue	Cases Exposure Route	Range	Mean	General Information
5568 Body	1	Not given	0.07 ppm Wet wt	Lake Providence, 11.1% lipids. Collected 6/15-9/25/80. Tertiary consumers, major foods are fish. Lakes acting as sumps. Louisiana GC

BODY; ENVIRONMENTAL EXPOSURE; LOUISIANA; CHLORINE ORGANIC COMPOUNDS; INSECTICIDES; BIOMAGNIFICATION; FISHES; AGRICULTURE; PESTICIDE RESIDUES; AQUATIC; TERRESTRIAL; BIRDS; SNAKES; FROGS; CRAYFISH

Niethammer, K.R.; White, D.H.; Baskett, T.S.; Sayre, M.W. 1984 Archives of Contamination and Toxicology 13:63-74

Heron, green-backed
BUTORIDES STRIATUS

Tissue	Cases Exposure Route	Range	Mean	General Information
5569 Adipose	4 Ingestion	Not given	0.10 ppm Wet wt	Composite from birds shot in 1980. Residues linked to fish diet. Louisiana, Lake Providence GC; GC/MS
5570 Body	a) 12 b) 14 Ingestion	a) Not detected-0.27 ppm b) Not detected-0.25 ppm Wet wt	a) 0.04 ppm b) 0.04 ppm Wet wt Geometric means	a) Adults, mean lipid 16.2%, 4 had detectable levels b) Immature, mean lipid 14.8%, 5 had detectable levels Collected (shot) in 1980. Beak, feet, wing tips, skin, GI tract removed before homogenization. Residues linked to fish diet. Louisiana, Lake Province, Lake Bruin, Lake St. John GC; GC/MS

CHLORINE ORGANIC COMPOUNDS; FISHES; LOUISIANA; PESTICIDE RESIDUES; BIOACCUMULATION; DIETS; ADIPOSE TISSUE; LIVER; MUSCLES; BRAIN; BIOLOGICAL MONITORING; ENVIRONMENTAL EXPOSURE; BIRDS; WATERFOWL; AQUATIC; TERRESTRIAL; WATER POLLUTION; DDD; DDE; DDT; DIELDRIN; POLYCHLORINATED BIPHENYLS

Niethammer, K.R.; Baskett, T.S.; White, D.H. 1984 Bulletin of Environmental Contamination and Toxicology 33:491-498

1,4:5,8-Dimethanonaphthalene, 1,2,3,4,10,10-hexachloro-6,7-epoxy-1,4,4a,5,6,7,8,8a-octahydro-, endo,endo- (8 CI) 2,7:3,6-Dimethanonaphth(2,3-b)oxirene, 3,4,5,6,9,9-hexachloro-1a,2,2a,3,6,6a,7,7a-octahydro-, (1aalpha,2beta,2abeta,3alpha,6alpha,6abeta,7beta,7aalpha)- (9 CI)
72-20-8
C12-H8-Cl6-O
MW 380.9, MP 200 C (decomp), also reported as 245 C (decomp)

Heron, green-backed
BUTORIDES STRIATUS

Tissue	Cases Exposure Route	Range	Mean	General Information
5571 Body	a) 4 b) 5	a) Not detected-0.08 ppm b) Not detected-0.27 ppm Wet wt	a) 0.04 ppm b) 0.06 ppm Wet wt	a) Lake Providence, 11.4% lipids b) Lake Bruin, 12.9% lipids Collected between 6/15-9/25/80. Tertiary consumers, major foods are fish. Lakes acting as sumps. Immature birds are good monitors of contamination. Louisiana GC
BODY; ENVIRONMENTAL EXPOSURE; LOUISIANA; CHLORINE ORGANIC COMPOUNDS; INSECTICIDES; BIOMAGNIFICATION; FISHES; AGRICULTURE; PESTICIDE RESIDUES; AQUATIC; TERRESTRIAL; BIRDS; SNAKES; FROGS; CRAYFISH Niethammer, K.R.; White, D.H.; Baskett, T.S.; Sayre, M.W. 1984 Archives of Contamination and Toxicology 13:63-74				

Heron, little blue
EGRETTA CAERULEA

Tissue	Cases Exposure Route	Range	Mean	General Information
5572 Body	a) 6 b) 15 Ingestion	a) Not detectable-0.38 ppm b) Not detectable-0.15 ppm Wet wt	a) 0.06 ppm b) 0.03 ppm Wet wt Geometric means	a) Adults, 3 had detectable levels, mean lipid 10.8% b) Immature, 2 had detectable levels, mean lipid 8.2% Collected (shot) 1980. Beak, feet, skin, wing tips and GI tracts removed before homogenization. Moderate residues linked to mixed diet of fish, crustaceans and insects. Louisana, Lake Providence, Lake Bruin, Lake St. John GC; GC/MS
CHLORINE ORGANIC COMPOUNDS; FISHES; LOUISIANA; PESTICIDE RESIDUES; BIOACCUMULATION; DIETS; ADIPOSE TISSUE; LIVER; MUSCLES; BRAIN; BIOLOGICAL MONITORING; ENVIRONMENTAL EXPOSURE; BIRDS; WATERFOWL; AQUATIC; TERRESTRIAL; WATER POLLUTION; DDD; DDE; DDT; DIELDRIN; POLYCHLORINATED BIPHENYLS Niethammer, K.R.; Baskett, T.S.; White, D.H. 1984 Bulletin of Environmental Contamination and Toxicology 33:491-498				

Tissue	Cases Exposure Route	Range	Mean	General Information
5573 Body	a) 4 b) 1	a) Not detected-0.38 ppm b) Not detected-0.08 Wet wt	a) 0.05 ppm b) 0.03 ppm Wet wt	a) Lake Bruin, 6.0% lipids b) Lake St. John, 18.2% lipids Collected 6/15-9/25/80. Tertiary consumer, major foods are small fish and invertebrates. Lakes acting as sumps. Louisiana GC
BODY; ENVIRONMENTAL EXPOSURE; LOUISIANA; CHLORINE ORGANIC COMPOUNDS; INSECTICIDES; BIOMAGNIFICATION; FISHES; AGRICULTURE; PESTICIDE RESIDUES; AQUATIC; TERRESTRIAL; BIRDS; SNAKES; FROGS; CRAYFISH Niethammer, K.R.; White, D.H.; Baskett, T.S.; Sayre, M.W. 1984 Archives of Contamination and Toxicology 13:63-74				

1,4:5,8-Dimethanonaphthalene, 1,2,3,4,10,10-hexachloro-6,7-epoxy-1,4,4a,5,6,7,8,8a-octahydro-, endo,endo- (8 CI) 2,7:3,6-Dimethanonaphth(2,3-b)oxirene, 3,4,5,6,9,9-hexachloro-1a,2,2a,3,6,6a,7,7a-octahydro-, (1aalpha,2beta,2abeta,3alpha,6alpha,6abeta,7beta,7aalpha)- (9 CI)
72-20-8
C12-H8-Cl6-O
MW 380.9, MP 200 C (decomp), also reported as 245 C (decomp)

Mackerel
SCOMBERDMORUS MACULATUS

Tissue	Cases Exposure Route	Range	Mean	General Information
5574 Muscle	2	Not given	0.65 ppb Wet wt	Collected 1/81. Mexico (NW), Sonora, Yavaros lagoon system GC

CRUSTACEANS; MOLLUSKS; MUSCLES; CHLORINE ORGANIC COMPOUNDS; MEXICO; BODY; BIOACCUMULATION; FISHES; PESTICIDE RESIDUES; WATER POLLUTION; AQUATIC; ENVIRONMENTAL EXPOSURE
Rosales, M.T.L.; Escalona, R.L. 1983 Bulletin of Environmental Contamination and Toxicology 30:456-463

Merganser, red-breasted
MERGUS SERRATOR

Tissue	Cases Exposure Route	Range	Mean	General Information
5575 Eggs	a) 40 b) 40	a) Not applicable b) Not applicable	a) 0.05 ppm b) 0.05 ppm Wet wt Geometric means	a) Randomly selected b) Unhatched Collected 1977, pairs from same nests analyzed. Lower limit 0.05 ppm. Lake Michigan, northwestern islands GLC

EGGS; AQUATIC; BIRDS; WATERFOWL; ENVIRONMENTAL EXPOSURE; GREAT LAKES; BROMINATED HYDROCARBONS; CHLORINATED HYDROCARBONS; BROMINE ORGANIC COMPOUNDS; CHLORINE ORGANIC COMPOUNDS; DDE; DDT; DIELDRIN; HEPTACHLOR EPOXIDE; HEXACHLOROBENZENE; INSECTICIDES; MERCURY; NONACHLOR; OXYCHLORDANE; PESTICIDES; POLYBROMINATED BIPHENYLS; POLYCHLORINATED BIPHENYLS; BIOACCUMULATION
Haseltine, S.D.; Heinz, G.H.; Hensler, G.L.; Reichel, W.L. 1983 Environmental Pollution 32:211-232

Mullet, striped
MUGIL CEPHALUS

Tissue	Cases Exposure Route	Range	Mean	General Information
5576 Muscle	a) 3 b) 3 c) 4	a) Not given b) Not given c) Not given	a) 7.33 ppb b) 1.72 ppb c) 4.80 ppb Wet wt	a) Moron carit, 7/81 b) Yavaros, 1/81 c) Yavaros, 4/81. Mexico (NW), Sonora, Yavaros lagoon system GC

CRUSTACEANS; MOLLUSKS; MUSCLES; CHLORINE ORGANIC COMPOUNDS; MEXICO; BODY; BIOACCUMULATION; FISHES; PESTICIDE RESIDUES; WATER POLLUTION; AQUATIC; ENVIRONMENTAL EXPOSURE
Rosales, M.T.L.; Escalona, R.L. 1983 Bulletin of Environmental Contamination and Toxicology 30:456-463

1,4:5,8-Dimethanonaphthalene, 1,2,3,4,10,10-hexachloro-6,7-epoxy-1,4,4a,5,6,7,8,8a-octahydro-, endo,endo- (8 CI) 2,7:3,6-Dimethanonaphth(2,3-b)oxirene, 3,4,5,6,9,9-hexachloro-1a,2,2a,3,6,6a,7,7a-octahydro-, (1aalpha,2beta,2abeta,3alpha,6alpha,6abeta,7beta,7aalpha)- (9 CI)
72-20-8
C12-H8-Cl6-O
MW 380.9, MP 200 C (decomp), also reported as 245 C (decomp)

Mullet, white
MUGIL CUREMA

Tissue	Cases Exposure Route	Range	Mean	General Information
5577 Muscle	4	Not given	7.60 ppb Wet wt	Collected 1/81. Mexico (NW), Sonora, Yavaros lagoon system GC
CRUSTACEANS; MOLLUSKS; MUSCLES; CHLORINE ORGANIC COMPOUNDS; MEXICO; BODY; BIOACCUMULATION; FISHES; PESTICIDE RESIDUES; WATER POLLUTION; AQUATIC; ENVIRONMENTAL EXPOSURE				
Rosales, M.T.L.; Escalona, R.L. 1983 Bulletin of Environmental Contamination and Toxicology 30:456-463				

Shad, threadfin
DOROSOMA PETENENSE

Tissue	Cases Exposure Route	Range	Mean	General Information
5578 Body	4	Not detected-0.12 ppm Wet wt	0.06 ppm Wet wt	Lake Bruin, 5.0% lipids. Collected 6/15-9/25/80. Primary consumer, major foods are green algae and protozoans. Lakes acting as sumps. Louisiana GC
BODY; ENVIRONMENTAL EXPOSURE; LOUISIANA; CHLORINE ORGANIC COMPOUNDS; INSECTICIDES; BIOMAGNIFICATION; FISHES; AGRICULTURE; PESTICIDE RESIDUES; AQUATIC; TERRESTRIAL; BIRDS; SNAKES; FROGS; CRAYFISH				
Niethammer, K.R.; White, D.H.; Baskett, T.S.; Sayre, M.W. 1984 Archives of Contamination and Toxicology 13:63-74				

Shiner, blacktail
NOTROPIS VENUSTUS

Tissue	Cases Exposure Route	Range	Mean	General Information
5579 Body	4	Not detected-0.09 ppm Wet wt	0.06 ppm Wet wt	Lake Bruin, 6.8% lipids. Collected 6/15-9/25/80. Secondary consumers, major foods are small invertebrates. Lakes acting as sumps. Louisiana GC
BODY; ENVIRONMENTAL EXPOSURE; LOUISIANA; CHLORINE ORGANIC COMPOUNDS; INSECTICIDES; BIOMAGNIFICATION; FISHES; AGRICULTURE; PESTICIDE RESIDUES; AQUATIC; TERRESTRIAL; BIRDS; SNAKES; FROGS; CRAYFISH				
Niethammer, K.R.; White, D.H.; Baskett, T.S.; Sayre, M.W. 1984 Archives of Contamination and Toxicology 13:63-74				

1,4:5,8-Dimethanonaphthalene, 1,2,3,4,10,10-hexachloro-6,7-epoxy-1,4,4a,5,6,7,8,8a-octahydro-, endo,endo- (8 CI) 2,7:3,6-Dimethanonaphth(2,3-b)oxirene, 3,4,5,6,9,9-hexachloro-1a,2,2a,3,6,6a,7,7a-octahydro-, (1aalpha,2beta,2abeta,3alpha,6alpha,6abeta,7beta,7aalpha)- (9 CI)
72-20-8
C12-H8-Cl6-O
MW 380.9, MP 200 C (decomp), also reported as 245 C (decomp)

Shrimp, blue
PENAEUS STYLIROSTRIS

Tissue	Cases Exposure Route	Range	Mean	General Information
5580 Body	51	Not given	0.40 ppb Wet wt	Collected 10/81. Mexico (NW), Sonora, Yavaros lagoon system GC

CRUSTACEANS; MOLLUSKS; MUSCLES; CHLORINE ORGANIC COMPOUNDS; MEXICO; BODY; BIOACCUMULATION; FISHES; PESTICIDE RESIDUES; WATER POLLUTION; AQUATIC; ENVIRONMENTAL EXPOSURE
Rosales, M.T.L.; Escalona, R.L. 1983 Bulletin of Environmental Contamination and Toxicology 30:456-463

Shrimp, white
PENAEUS VANAMEI

Tissue	Cases Exposure Route	Range	Mean	General Information
5581 Body	12	Not given	0.21 ppb Wet wt	Moron carit, 7/81. Mexico (NW), Sonora, Yavaros lagoon system GC

CRUSTACEANS; MOLLUSKS; MUSCLES; CHLORINE ORGANIC COMPOUNDS; MEXICO; BODY; BIOACCUMULATION; FISHES; PESTICIDE RESIDUES; WATER POLLUTION; AQUATIC; ENVIRONMENTAL EXPOSURE
Rosales, M.T.L.; Escalona, R.L. 1983 Bulletin of Environmental Contamination and Toxicology 30:456-463

Snake, water
NERODIA (NATRIX) RHOMBIFERA

Tissue	Cases Exposure Route	Range	Mean	General Information
5582 Adipose	14	Not given	0.01 ppm	Thomas Point and Brusly sites. Collected between 1977 & 79, residue detected in 3 of 14. Louisiana, Mississippi River, near Baton Rouge GC-EC

ADIPOSE TISSUE; LIVER; MUSCLES; BODY; SNAKES; AQUATIC; ENVIRONMENTAL EXPOSURE; LOUISIANA; CHLORINE ORGANIC COMPOUNDS; LINDANE; ALDRIN; DIELDRIN; HEPTACHLOR EPOXIDE; HEXACHLOROBENZENE; DDT; DDE; DDE; POLYCHLORINATED BIPHENYLS; FISHES; AGRICULTURE; BIOMAGNIFICATION; BIOCONCENTRATION; PESTICIDE RESIDUES; WATER POLLUTION
Sabourin, T.D.; Stickle, W.B.; Michot, C.E.; Garton, D.W.; Mushinsky, H.R. 1984 Bulletin of Environmental Contamination and Toxicology 32:460-468

1,4:5,8-Dimethanonaphthalene, 1,2,3,4,10,10-hexachloro-6,7-epoxy-1,4,4a,5,6,7,8,8a-octahydro-, endo,endo- (8 CI) 2,7:3,6-Dimethanonaphth(2,3-b)oxirene, 3,4,5,6,9,9-hexachloro-1a,2,2a,3,6,6a,7,7a-octahydro-, (1aalpha,2beta,2abeta,3alpha,6alpha,6abeta,7beta,7aalpha)- (9 CI)
72-20-8
C12-H8-Cl6-O
MW 380.9, MP 200 C (decomp), also reported as 245 C (decomp)

Snake, water
NERODIA (NATRIX) RHOMBIFERA

Tissue	Cases Exposure Route	Range	Mean	General Information
5583 Body	a) 1 b) 1	a) Not detected-0.42 ppm b) Not detected-0.11 ppm Wet wt	a) 0.03 ppm b) 0.03 ppm Wet wt	a) Lake Bruin, 3.7% lipids b) Lake St. John, 6.6% lipids Collected 6/15-9/25/80. Tertiary consumers, major foods are fish and frogs. Lakes acting as sumps. Louisiana GC

BODY; ENVIRONMENTAL EXPOSURE; LOUISIANA; CHLORINE ORGANIC COMPOUNDS; INSECTICIDES; BIOMAGNIFICATION; FISHES; AGRICULTURE; PESTICIDE RESIDUES; AQUATIC; TERRESTRIAL; BIRDS; SNAKES; FROGS; CRAYFISH

Niethammer, K.R.; White, D.H.; Baskett, T.S.; Sayre, M.W. 1984 Archives of Contamination and Toxicology 13:63-74

Tissue	Cases Exposure Route	Range	Mean	General Information
5584 Liver	22	0.01-0.02 ppm	Not given	Thomas Point and Brusly sites, collected between 1977 & 79. Residue detected in 9 of 22. Range of means. Louisiana, Mississippi River, near Baton Rouge GC-EC

ADIPOSE TISSUE; LIVER; MUSCLES; BODY; SNAKES; AQUATIC; ENVIRONMENTAL EXPOSURE; LOUISIANA; CHLORINE ORGANIC COMPOUNDS; LINDANE; ALDRIN; DIELDRIN; HEPTACHLOR EPOXIDE; HEXACHLOROBENZENE; DDT; DDE; DDE; POLYCHLORINATED BIPHENYLS; FISHES; AGRICULTURE; BIOMAGNIFICATION; BIOCONCENTRATION; PESTICIDE RESIDUES; WATER POLLUTION

Sabourin, T.D.; Stickle, W.B.; Michot, C.E.; Garton, D.W.; Mushinsky, H.R. 1984 Bulletin of Environmental Contamination and Toxicology 32:460-468

1,4:5,8-Dimethanonaphthalene, 1,2,3,4,10,10-hexachloro-6,7-epoxy-1,4,4a,5,6,7,8,8a-octahydro-, endo,endo- (8 CI) 2,7:3,6-Dimethanonaphth(2,3-b)oxirene, 3,4,5,6,9,9-hexachloro-1a,2,2a,3,6,6a,7,7a-octahydro-, (1aalpha,2beta,2abeta,3alpha,6alpha,6abeta,7beta,7aalpha)- (9 CI)
72-20-8
C12-H8-Cl6-O
MW 380.9, MP 200 C (decomp), also reported as 245 C (decomp)

Tilapia
TILAPIA sp.

Tissue	Cases Exposure Route	Range	Mean	General Information
5555 Muscle	Ingestion	a) 1.2-15.9 ug/L b) 7.6-45.5 ug/L c) 5.0-28.5 ug/L d) 10.3-45.3 ug/L e) 11.0-35.2 ug/L f) 6.5-28.0 ug/L g) Not detected-56.2 ug/L h) 12.5-52.6 ug/L	a) 29.7 ug/L [sic] b) 24.9 ug/L c) 19.9 ug/L d) 25.3 ug/L e) 21.2 ug/L f) 18.2 ug/L g) 21.6 ug/L h) 31.0 ug/L	a) Aswan b) Assiut c) Cairo d) El-Mansora e) Paraskour f) Edfina g) El-Mahmodra canal h) Abo El-Gheit canal 80 composite samples, approx 5 fish each. Sites a) near Lake Nassar, e), f) near Mediterranean Sea on the Nile River, g), h) in agricultural areas polluted with pesticides (application, leachates). Egypt, Nile River and canals GC-EC
PESTICIDE RESIDUES; FISHES; MUSCLES; EGYPT; AQUATIC; CHLORINE ORGANIC COMPOUNDS; DDT; DDE; BIOLOGICAL MONITORING; WATER POLLUTION; METABOLITES; LINDANE; INSECTICIDES; ENVIRONMENTAL EXPOSURE; HEXACHLOROCYCLOHEXANE				
Aly, O.A.; Badawy, M.I. 1984 Bulletin of Environmental Contamination and Toxicology 33:246-252				

1,4:5,8-Dimethanonaphthalene, 1,2,3,4,10,10-hexachloro-6,7-epoxy-1,4,4a,5,6,7,8,8a-octahydro-, endo,exo- (8 CI) 2,7:3,6-Dimethanonaphth(2,3-b)oxirene, 3,4,5,6,9,9-hexachloro-1a,2,2a,3,6,6a,7,7a-octahydro-, (1aalpha,2beta,2aalpha,3beta,6beta,6aalpha,7beta,7aalpha)- (9 CI)
60-57-1
C12-H8-Cl6-O
MW 380.93, MP 176-177 C, VP 7.78X10(E-7) mm Hg at 20 C

Bass, largemouth
MICROPTERUS SALMOIDES

Tissue	Cases Exposure Route	Range	Mean	General Information
5556 Body	3	Not detected-0.07 ppm Wet wt	0.04 ppm Wet wt	Lake Providence, 7.3% lipids. Collected 6/15-9/25/80. Tertiary consumers, major foods are fish and crayfish. Lakes acting as sumps. Louisiana GC
BODY; ENVIRONMENTAL EXPOSURE; LOUISIANA; CHLORINE ORGANIC COMPOUNDS; INSECTICIDES; BIOMAGNIFICATION; FISHES; AGRICULTURE; PESTICIDE RESIDUES; AQUATIC; TERRESTRIAL; BIRDS; SNAKES; FROGS; CRAYFISH				
Niethammer, K.R.; White, D.H.; Baskett, T.S.; Sayre, M.W. 1984 Archives of Contamination and Toxicology 13:63-74				

1,4:5,8-Dimethanonaphthalene, 1,2,3,4,10,10-hexachloro-6,7-epoxy-1,4,4a,5,6,7,8,8a-octahydro-, endo,exo- (8 CI) 2,7:3,6-Dimethanonaphth(2,3-b)oxirene, 3,4,5,6,9,9-hexachloro-1a,2,2a,3,6,6a,7,7a-octahydro-, (1aalpha,2beta,2aalpha,3beta,6beta,6aalpha,7beta,7aalpha)- (9 CI)
60-57-1
C12-H8-Cl6-O
MW 380.93, MP 176-177 C, VP 7.78X10(E-7) mm Hg at 20 C

Bat, gray
MYOTIS GRISESCENS

Tissue	Cases Exposure Route	Range	Mean	General Information
5587 Body	a) 3 b) 3	a) 0.26-27 ppm b) 10-19 ppm Wet wt	a) 16.09 ppm b) 15.67 ppm Wet wt	a) Devil's Icebox Cave b) Hunter Cave Found dead 7/81. Forearm length 43.1-43.6 mm Missouri, Boone County GC-EC
5588 Brain	a) 4 b) 3	a) Not detected-21 ppm b) 5.6-14 ppm Wet wt	a) 11.3 ppm b) 10.2 ppm Wet wt	a) Devil's Icebox Cave b) Hunter Cave Found dead 7/81. Forearm length 43.1-43.6 mm Missouri, Boone County GC-EC
BATS; DIELDRIN; HEPTACHLOR EPOXIDE; OXYCHLORDANE; BIOACCUMULATION; PESTICIDE RESIDUES; BODY; BRAIN; MISSOURI; ADULTS				
Clark, D.R., Jr.; Clawson, R.L.; Stafford, C.J. 1983 Bulletin of Environmental Contamination and Toxicology 30:214-218				

Bat, little brown
MYOTIS LUCIFUGUS

Tissue	Cases Exposure Route	Range	Mean	General Information
5589 Body	47 Ingestion	Not given	2.5 ppm Wet wt	Fed mealworms with 0.38 ppm wet weight dieldrin for 52 d. Maryland, Cecil County, North East GC-EC
5590 Brain	a) 1 b) 1 c) 1 d) 1 e) 1 f) 1 Ingestion	Not given	a) 0.67 ppm b) 1.3 ppm c) [illegible].02 ppm d) 0.80 ppm e) 0.51 ppm f) 0.61 ppm	a) 32 d after start of dose b) 34 d c) 52 d d) 54 d e) 57 d f) 60 d Fed mealworms with 0.38 ppm wet weight dieldrin for 52 d. All below lethal level, about 5 ppm. Undetected in 41 cases. Maryland, Cecil County, North East GC-EC
BODY; BRAIN; BATS; TERRESTRIAL; DELIBERATE EXPOSURE; MARYLAND; DIELDRIN; INSECTICIDES; PESTICIDES				
Clark, D.R.; Prouty, R.M. 1984 Bulletin of Environmental Contamination and Toxicology 33:177-183				

1,4:5,8-Dimethanonaphthalene, 1,2,3,4,10,10-hexachloro-6,7-epoxy-1,4,4a,5,6,7,8,8a-octahydro-, endo,exo- (8 CI) 2,7:3,6-Dimethanonaphth(2,3-b)oxirene, 3,4,5,6,9,9-hexachloro-1a,2,2a,3,6,6a,7,7a-octahydro-, (1aalpha,2beta,2aalpha,3beta,6beta,6aalpha,7beta,7aalpha)- (9 CI)
60-57-1
C12-H8-Cl6-O
MW 380.93, MP 176-177 C, VP 7.78X10(E-7) mm Hg at 20 C

Catfish, channel
ICTALURUS PUNETATUS

Tissue	Cases Exposure Route	Range	Mean	General Information
5591 Body	1	Not detected-0.09 ppm Wet wt	0.03 ppm Wet wt	Lake Providence, 2.9% lipids. Collected 6/15-9/25/80. Tertiary consumers, major foods are fish and insects. Lakes acting as sumps. Louisiana GC
BODY; ENVIRONMENTAL EXPOSURE; LOUISIANA; CHLORINE ORGANIC COMPOUNDS; INSECTICIDES; BIOMAGNIFICATION; FISHES; AGRICULTURE; PESTICIDE RESIDUES; AQUATIC; TERRESTRIAL; BIRDS; SNAKES; FROGS; CRAYFISH				
Niethammer, K.R.; White, D.H.; Baskett, T.S.; Sayre, M.W. 1984 Archives of Contamination and Toxicology 13:63-74				

Cattle
BOS sp.

Tissue	Cases Exposure Route	Range	Mean	General Information
5592 Milk	Ingestion	a) 0.04-0.07 ppm b) 0.08-0.09 ppm c) 0.09-0.09 ppm d) 0.09-0.07 ppm e) </=0.001 ppm	a) Not given b) Not given c) Not given d) Not given e) Not given	a) 1972 & 3 b) 1974 & 5 c) 1976 & 7 d) 1978 & 9 e) 1980 & 1 Range of yearly means. Composite samples from several farms. Data include parent compound aldrin. Levels constant over 10 yr. In statewide monitoring for chlorinated hydrocarbon insecticides, percentage contaminated samples decreased over study period. Illinois GC/MS
INSECTICIDES; PESTICIDE RESIDUES; MILK; CATTLE; ILLINOIS; BIOLOGICAL MONITORING; BIOCONCENTRATION; ALDRIN; DIELDRIN; DDT; METABOLITES; HEPTACHLOR EPOXIDE; TERRESTRIAL; CHLORINATED HYDROCARBONS; ENVIRONMENTAL EXPOSURE; HEXACHLOROCYCLOHEXANE				
Steffey, K.L.; Mack, J.; MacMonegle, C.W.; Pettyl, H.B. 1984 Journal of Environmental Science and Health B19(1):49-65				

Clam
MEGAPITARIA SQUALIDA

Tissue	Cases Exposure Route	Range	Mean	General Information
5593 Body	16	Not given	7.12 ppb Wet wt	Collected 7/80. Mexico (NW), Sonora, Yavaros lagoon system GC
CRUSTACEANS; MOLLUSKS; MUSCLES; CHLORINE ORGANIC COMPOUNDS; MEXICO; BODY; BIOACCUMULATION; FISHES; PESTICIDE RESIDUES; WATER POLLUTION; AQUATIC; ENVIRONMENTAL EXPOSURE				
Rosales, M.T.L.; Escalona, R.L. 1983 Bulletin of Environmental Contamination and Toxicology 30:456-463				

1,4:5,8-Dimethanonaphthalene, 1,2,3,4,10,10-hexachloro-6,7-epoxy-1,4,4a,5,6,7,8,8a-octahydro-, endo,exo- (8 CI) 2,7:3,6-Dimethanonaphth(2,3-b)oxirene, 3,4,5,6,9,9-hexachloro-1a,2,2a,3,6,6a,7,7a-octahydro-, (1aalpha,2beta,2aalpha,3beta,6beta,6aalpha,7beta,7aalpha)- (9 CI)
60-57-1
C12-H8-Cl6-O
MW 380.93, MP 176-177 C, VP 7.78X10(E-7) mm Hg at 20 C

Clam, Asiatic
CORBICULA MANILENSIS

Tissue	Cases Exposure Route	Range	Mean	General Information
5594 Body, whole	9	0.5-2.9 ug/kg Dry wt	2 ug/kg Dry wt Median	Trend in concentration increase from inorganic to organic to living material. August 1979-May 1980, sampling dates. Non-point sources. No significant seasonal, temporal or spatial variability reported. Florida, Apalachicola River GC-EC
BODY; ASIATIC CLAM; AQUATIC; ENVIRONMENTAL EXPOSURE; FLORIDA; TRACE ELEMENTS; PESTICIDES; POLYCHLORINATED BIPHENYLS; CHROMIUM; COPPER; LEAD; MANGANESE; MERCURY; ZINC; DDD; ORGANOPHOSPHATES; DDE; DDT; DIELDRIN; HEPTACHLOR EPOXIDE; INSECTICIDES; GEOLOGY Elder, J.P.; Mattraw, H.C. 1984 Archives of Environmental Contamination and Toxicology 13:453-469				

Clam, hard-shell
MERCENARIA MERCENARIA

Tissue	Cases Exposure Route	Range	Mean	General Information
5595 Body	a) 213 b) 138 c) 96 d) 262 e) 379 Ingestion	a) Not detected-0.007 ug/g b) 0.001-0.007 ug/g c) Not detected-0.020 ug/g d) Not detected-0.010 ug/g e) 0.001-0.009 ug/g Wet wt	a) 0.003 ug/g b) 0.004 ug/g c) 0.009 ug/g d) 0.004 ug/g e) 0.004 ug/g Wet wt	a) 1976 b) 1977 c) 1978 d) 1979 e) 1980 Data include soft-shell clam, MYA ARENARIA. Biological monitoring for organochlorine residues in shellfish, 1976-1980. Virtually all values below FDA guidelines or safe levels. Sample size small, no yearly periodic variation after 1976. Maryland, Chesapeake Bay area, tributaries GC-EC
CLAMS; CRABS; SHELLFISH; OYSTERS; MARYLAND; CHESAPEAKE BAY; BIOLOGICAL MONITORING; BIOCONCENTRATION; WATER POLLUTION; FOOD CONTAMINATION; CHLORINE ORGANIC COMPOUNDS; DDD; DDE; POLYCHLORINATED BIPHENYLS; CHLORDANE; DIELDRIN; BHC; AQUATIC; ENVIRONMENTAL EXPOSURE Eisenberg, M.; Topping, J.J. 1984 Journal of Environmental Science and Health B19(7):673-688				

1,4:5,8-Dimethanonaphthalene, 1,2,3,4,10,10-hexachloro-6,7-epoxy-1,4,4a,5,6,7,8,8a-octahydro-, endo,exo- (8 CI) 2,7:3,6-Dimethanonaphth(2,3-b)oxirene, 3,4,5,6,9,9-hexachloro-1a,2,2a,3,6,6a,7,7a-octahydro-, (1aalpha,2beta,2aalpha,3beta,6beta,6aalpha,7beta,7aalpha)- (9 CI)
60-57-1
C12-H8-Cl6-O
MW 380.98, MP 176-177 C, VP 7.78X10(E-7) mm Hg at 20 C

Clam, soft-shell
MYA ARENARIA

Tissue	Cases Exposure Route	Range	Mean	General Information
5596 Body	a) 26 b) 7 c) 18 d) 115 e) 34 Ingestion	a) Not detected-0.007 ug/g b) 0.001-0.007 ug/g c) Not detected-0.020 ug/g d) Not detected-0.010 ug/g e) 0.001-0.009 ug/g Wet wt	a) 0.003 ug/g b) 0.004 ug/g c) 0.009 ug/g d) 0.004 ug/g e) 0.004 ug/g Wet wt	a) 1976 b) 1977 c) 1978 d) 1979 e) 1980 Data include hard-shell clam, MERCENARIA MERCENARIA. Biological monitoring for organochlorine residues in shellfish 1976-1980. Virtually all values below FDA guidelines or safe levels. Sample size small, no yearly periodic variation. Maryland, Chesapeake Bay area, tributaries GC-EC

CLAMS; CRABS; SHELLFISH; OYSTERS; MARYLAND; CHESAPEAKE BAY; BIOLOGICAL MONITORING; BIOCONCENTRATION; WATER POLLUTION; FOOD CONTAMINATION; CHLORINE ORGANIC COMPOUNDS; DDD; DDE; POLYCHLORINATED BIPHENYLS; CHLORDANE; DIELDRIN; BHC; AQUATIC; ENVIRONMENTAL EXPOSURE

Eisenberg, M.; Topping, J.J. 1984 Journal of Environmental Science and Health B19(7):673-688

Coot, American
FULICA AMERICANA

Tissue	Cases Exposure Route	Range	Mean	General Information
5597 Body	2	Not detected-0.09 ppm Wet wt	0.04 ppm Wet wt	Lake Providence, 10.6% lipids. Collected 2/80. Secondary consumers. Lakes acting as sumps. Louisiana GC

BODY; ENVIRONMENTAL EXPOSURE; LOUISIANA; CHLORINE ORGANIC COMPOUNDS; INSECTICIDES; BIOMAGNIFICATION; FISHES; AGRICULTURE; PESTICIDE RESIDUES; AQUATIC; TERRESTRIAL; BIRDS; SNAKES; FROGS; CRAYFISH

Niethammer, K.R.; White, D.H.; Baskett, T.S.; Sayre, M.W. 1984 Archives of Contamination and Toxicology 13:63-74

Cormorant, white-breasted
PHALACROCORAX CARBO

Tissue	Cases Exposure Route	Range	Mean	General Information
5598 Eggs	1	Not applicable	0.004 ug/g	9 eggs analysed. Levels appear too low to cause adverse effects. Marine species generally less contaminated than estuarine/freshwater feeders. South Africa, Eastern Cape GC/MS

BIRDS; AQUATIC; SOUTH AFRICA; CHLORINATED HYDROCARBONS; CHLORINE ORGANIC COMPOUNDS; DDE; DDT; DIELDRIN; PESTICIDES; INSECTICIDES; POLYCHLORINATED BIPHENYLS; BIOACCUMULATION; BIOINDICATORS; PESTICIDE RESIDUES; WATER POLLUTION; ENVIRONMENTAL EXPOSURE

de Kock, A.C.; Randall, R.M. 1984 Environmental Pollution (Series A) 35:193-201

1,4:5,8-Dimethanonaphthalene, 1,2,3,4,10,10-hexachloro-6,7-epoxy-1,4,4a,5,6,7,8,8a-octahydro-, endo,exo- (8 CI) 2,7:3,6-Dimethanonaphth(2,3-b)oxirene, 3,4,5,6,9,9-hexachloro-1a,2,2a,3,6,6a,7,7a-octahydro-, (1aalpha,2beta,2aalpha,3beta,6beta,6aalpha,7beta,7aalpha)- (9 CI)
60-57-1
C12-H8-Cl6-O
MW 380.93, MP 176-177 C, VP 7.78X10(E-7) mm Hg at 20 C

Cottonmouth
AGKISTRODON PISCIVOROUS

Tissue	Cases Exposure Route	Range	Mean	General Information
5599 Body	3	Not detected-0.10 ppm Wet wt	0.03 ppm Wet wt	Lake Providence, 4.3% lipids. Collected 6/15-9/25/80. Tertiary consumers, major foods are snakes, fish and frogs. Lakes acting as sumps. Louisiana GC

BODY; ENVIRONMENTAL EXPOSURE; LOUISIANA; CHLORINE ORGANIC COMPOUNDS; INSECTICIDES; BIOMAGNIFICATION; FISHES; AGRICULTURE; PESTICIDE RESIDUES; AQUATIC; TERRESTRIAL; BIRDS; SNAKES; FROGS; CRAYFISH
Niethammer, K.R.; White, D.H.; Baskett, T.S.; Sayre, M.W. 1984 Archives of Contamination and Toxicology 13:63-74

Crab
CALLINECTES ARCUATUS

Tissue	Cases Exposure Route	Range	Mean	General Information
5600 Body	a) 5 b) 5	a) Not given b) Not given	a) 0.37 ppb b) 1.20 ppb Wet wt	a) Caimanero, 10/80 b) Yavaros, 1/81. Mexico (NW), Sonora, Yavaros lagoon system, Mexico (NW), Sinaloa, Huizache-Caimanero lagoon system GC

CRUSTACEANS; MOLLUSKS; MUSCLES; CHLORINE ORGANIC COMPOUNDS; MEXICO; BODY; BIOACCUMULATION; FISHES; PESTICIDE RESIDUES; WATER POLLUTION; AQUATIC; ENVIRONMENTAL EXPOSURE
Rosales, M.T.L.; Escalona, R.L. 1983 Bulletin of Environmental Contamination and Toxicology 30:456-463

Crab, blue
CALLINECTES SAPIDUS

Tissue	Cases Exposure Route	Range	Mean	General Information
5601 Body	a) 3 b) 9 c) 22 Ingestion	a) 0.002-0.004 ug/g b) Not detected-0.010 ug/g c) Not detected-0.004 ug/g Wet wt	a) 0.003 ug/g b) 0.003 ug/g c) 0.001 ug/g Wet wt	a) 1976 b) 1979 c) 1980 Biological monitoring for organochlorine residues in shellfish, 1976-1980. Virtually all values below FDA guidelines or safe levels. Sample size small (none 1978), mostly in 1979-1980, not possible to see yearly trend. Data not available 1977. Maryland, Chesapeake Bay area, tributaries GC-EC

CLAMS; CRABS; SHELLFISH; OYSTERS; MARYLAND; CHESAPEAKE BAY; BIOLOGICAL MONITORING; BIOCONCENTRATION; WATER POLLUTION; FOOD CONTAMINATION; CHLORINE ORGANIC COMPOUNDS; DDD; DDE; POLYCHLORINATED BIPHENYLS; CHLORDANE; DIELDRIN; BHC; AQUATIC; ENVIRONMENTAL EXPOSURE
Eisenberg, M.; Topping, J.J. 1984 Journal of Environmental Science and Health B19(7):673-688

1,4:5,8-Dimethanonaphthalene, 1,2,3,4,10,10-hexachloro-6,7-epoxy-1,4,4a,5,6,7,8,8a-octahydro-, endo,exo- (8 CI) 2,7:3,6-Dimethanonaphth(2,3-b)oxirene, 3,4,5,6,9,9-hexachloro-1a,2,2a,3,6,6a,7,7a-octahydro-, (1aalpha,2beta,2aalpha,3beta,6beta,6aalpha,7beta,7aalpha)- (9 CI)
60-57-1
C12-H8-Cl6-O
MW 380.98, MP 176-177 C, VP 7.78X10(E-7) mm Hg at 20 C

Dove, mourning
ZENAIDURA MACROURA

Tissue	Cases Exposure Route	Range	Mean	General Information
5602 Adipose	4	<0.0230-0.122 ppm	0.0555 ppm	Levels lower than in woodcock. No aldrin detected. Illinois, Vermilion and Shelby Counties GC-EC
5603 Brain	8	<0.0001-0.179 ppm	0.0508 ppm	None in 1 bird (same species). Levels higher than in woodcock or robins. None contained aldrin. Illinois, Vermilion and Shelby Counties GC-EC
5604 Heart	5	<0.0001-0.0878 ppm	0.0198 ppm	None in 1 bird (same species). Levels lower than in woodcock, higher than in robins. None contained aldrin. Illinois, Vermilion and Shelby Counties GC-EC
5605 Liver	6	<0.0001-0.0317 ppm	0.0107 ppm	None in 1 bird (same species). Levels lower than in woodcock, higher than in robins. None contained aldrin. Illinois, Vermilion and Shelby Counties GC-EC
5606 Muscle	6	<0.0001-0.0260 ppm	0.0103 ppm	None in 2 birds (same species). Levels lower than in woodcock, higher than in robins. None contained aldrin. Illinois, Vermilion and Shelby Counties GC-EC

ADIPOSE TISSUE; BRAIN; MUSCLES; LIVER; HEART; TERRESTRIAL; BIRDS; ENVIRONMENTAL EXPOSURE; ILLINOIS; CHLORINATED HYDROCARBONS; CHLORINE ORGANIC COMPOUNDS; DDE; DIELDRIN; HEPTACHLOR EPOXIDE; INSECTICIDES; PESTICIDES; POLYCHLORINATED BIPHENYLS; BIOACCUMULATION; FOOD CONTAMINATION; PESTICIDE RESIDUES

Edwards, W.R.; Dusan, R.E.; Siemers, R.J. 1983 Bulletin of Environmental Contamination and Toxicology 31:407-414

1,4:5,8-Dimethanonaphthalene, 1,2,3,4,10,10-hexachloro-6,7-epoxy-1,4,4a,5,6,7,8,8a-octahydro-, endo,exo- (8 Cl) 2,7:3,6-Dimethanonaphth(2,3-b)oxirene, 3,4,5,6,9,9-hexachloro-1a,2,2a,3,6,6a,7,7a-octahydro-, (1aalpha,2beta,2aalpha,3beta,6beta,6aalpha,7beta,7aalpha)- (9 CI)
60-57-1
C12-H8-Cl6-O
MW 380.93, MP 176-177 C, VP 7.78X10(E-7) mm Hg at 20 C

Eagle, bald
HALIAEETUS LEUCOCEPHALUS

Tissue	Cases Exposure Route	Range	Mean	General Information
5607 Eggs	116	a) Not applicable b) Not applicable c) 0.13-0.20 ppm d) 0.05-1.6 ppm e) 0.09-2.4 ppm f) 0.09-1.0 ppm g) 1.6-1.8 ppm h) 0.18-0.23 ppm i) 0.08-1.20 ppm j) 0.74-1.60 ppm k) 0.50-2.60 ppm l) 0.53-2.80 ppm m) Not applicable n) 0.10-0.61 ppm Fresh wet wt	a) 0.12 ppm b) 0.04 ppm c) 0.16 ppm d) 0.41 ppm e) 0.67 ppm f) 0.42 ppm g) 1.7 ppm h) 0.21 ppm i) 0.43 ppm j) 1.1 ppm k) 1.28 ppm l) 1.36 ppm m) 0.50 ppm n) 0.30 ppm Fresh wet wt	a) AK, 1976, 1 egg b) CA, 1977, 2 eggs c) AZ, 1977, 3 eggs d) MN, 1972, 1976-79, 15 eggs e) WI, 1976-79, 35 eggs f) MI, 1969, 1974, 1978, 4 eggs g) OH, 1973, 2 eggs h) NY, 1971, 1977-78, 3 eggs i) ME, 1974-79, 19 eggs j) DE, 1977-78, 3 eggs k) MD, 1973, 1977-79, 11 eggs l) VA, 1976-77, 1979, 11 eggs m) LA, 1979, 1 egg n) FL, 1975-77, 1979, 6 eggs In nearly all eggs from conterminous states, in only 1 of 6 from Alaska. Highest levels in Chesapeake Bay area but generally declining with time. GE-EC; GC-MS; Silica gel chrom.

EGGS; EAGLES; BIRDS; ENVIRONMENTAL EXPOSURE; ALASKA; ARIZONA; CALIFORNIA; DELAWARE; FLORIDA; LOUISIANA; MAINE; MARYLAND; MICHIGAN; MINNESOTA; NEW YORK; OHIO; OREGON; VIRGINIA; WISCONSIN; UNITED STATES; CHLORINATED HYDROCARBONS; CHLORINE ORGANIC COMPOUNDS; DDD; DDE; DDT; DIELDRIN; HEXACHLOROBENZENE; INSECTICIDES; MERCURY; PESTICIDES; POLYCHLORINATED BIPHENYLS; BIOACCUMULATION; PESTICIDE RESIDUES; POPULATION EXPOSURE

Wiemeyer, S.N.; Lamont, T.G.; Bunck, C.M.; Sindelar, C.R.; Gramlich, F.J.; Fraser, J.D.; Byrd, M.A. 1984 Archives of Environmental Contamination and Toxicology 13:529-549

Eagle, booted
HIERAETUS PENNATUS

Tissue	Cases Exposure Route	Range	Mean	General Information
5608 Eggs	a) 1 b) 3 Ingestion	a) Not given b) Not given	a) 0.131 ppm b) 0.001 ppm Wet wt	a) Collected 1981 b) 1983. Spain GLC

EGGS; ENVIRONMENTAL EXPOSURE; SPAIN; ADULTS; METAL POISONING; DDE; DDD; DDT; DIELDRIN; HEXACHLOROCYCLOHEXANE; HEPTACHLOR EPOXIDE; ALDRIN; POLYCHLORINATED BIPHENYLS; MERCURY; LEAD; CADMIUM; COPPER; ZINC; BIOACCUMULATION; BIOCONCENTRATION; HEALTH HAZARDS; PESTICIDE RESIDUES; BIRDS; TERRESTRIAL

Gonzales, M.J.; Hernandez, L.M.; Rico, M.C.; Baluja, G. 1984 Journal of Environmental Health and Science

1,4:5,8-Dimethanonaphthalene, 1,2,3,4,10,10-hexachloro-6,7-epoxy-1,4,4a,5,6,7,8,8a-octahydro-, endo,exo- (8 CI) 2,7:3,6-Dimethanonaphth(2,3-b)oxirene, 3,4,5,6,9,9-hexachloro-1a,2,2a,3,6,6a,7,7a-octahydro-, (1aalpha,2beta,2aalpha,3beta,6beta,6aalpha,7beta,7aalpha)- (9 CI)
60-57-1
C12-H8-Cl6-O
MW 380.93, MP 176-177 C, VP 7.78X10(E-7) mm Hg at 20 C

Eagle, imperial
AQUILA HELICA

Tissue	Cases Exposure Route	Range	Mean	General Information
5609 Eggs	a) 6 b) 3 Ingestion	a) Not given b) Not given	a) 0.078 ppm b) 0.056 ppm Wet wt	a) Collected 1980 b) 1981. Spain GLC

EGGS; ENVIRONMENTAL EXPOSURE; SPAIN; ADULTS; METAL POISONING; DDE; DDD; DDT; DIELDRIN; HEXACHLOROCYCLOHEXANE; HEPTACHLOR EPOXIDE; ALDRIN; POLYCHLORINATED BIPHENYLS; MERCURY; LEAD; CADMIUM; COPPER; ZINC; BIOACCUMULATION; BIOCONCENTRATION; HEALTH HAZARDS; PESTICIDE RESIDUES; BIRDS; TERRESTRIAL

Gonzales, M.J.; Hernandez, L.M.; Rico, M.C.; Baluja, G. 1984 Journal of Environmental Health and Science

Fish
CENTROPOMUS ROBALITO

Tissue	Cases Exposure Route	Range	Mean	General Information
5610 Muscle		a) Not given b) Not given	a) 1.38 ppb b) 1.40 ppb Wet wt	a) Collected 10/80 b) Collected 1/81. Mexico (NW), Sinaloa, Huizache-Caimanero lagoon system GC

CRUSTACEANS; MOLLUSKS; MUSCLES; CHLORINE ORGANIC COMPOUNDS; MEXICO; BODY; BIOACCUMULATION; FISHES; PESTICIDE RESIDUES; WATER POLLUTION; AQUATIC; ENVIRONMENTAL EXPOSURE

Rosales, M.T.L.; Escalona, R.L. 1983 Bulletin of Environmental Contamination and Toxicology 30:456-463

Gannet, cape
SULA CAPENSIS

Tissue	Cases Exposure Route	Range	Mean	General Information
5611 Eggs	3	0.002-0.003 ug/g	0.002 ug/g	4 eggs analyzed. Levels appear too low to cause adverse effects. Marine species generally less contaminated than estuarine/freshwater feeders. South Africa, Eastern Cape GC/MS

BIRDS; AQUATIC; SOUTH AFRICA; CHLORINATED HYDROCARBONS; CHLORINE ORGANIC COMPOUNDS; DDE; DDT; DIELDRIN; PESTICIDES; INSECTICIDES; POLYCHLORINATED BIPHENYLS; BIOACCUMULATION; BIOINDICATORS; PESTICIDE RESIDUES; WATER POLLUTION; ENVIRONMENTAL EXPOSURE

de Kock, A.C.; Randall, R.M. 1984 Environmental Pollution (Series A) 35:193-201

1,4:5,8-Dimethanonaphthalene, 1,2,3,4,10,10-hexachloro-6,7-epoxy-1,4,4a,5,6,7,8,8a-octahydro-, endo,exo- (8 CI) 2,7:3,6-Dimethanonaphth(2,3-b)oxirene, 3,4,5,6,9,9-hexachloro-1a,2,2a,3,6,6a,7,7a-octahydro-, (1aalpha,2beta,2aalpha,3beta,6beta,6aalpha,7beta,7aalpha)- (9 CI)

60-57-1

C12-H8-Cl6-O

MW 380.93, MP 176-177 C, VP 7.78X10(E-7) mm Hg at 20 C

Gar, spotted
LEPISOSTEUS OCULATUS

Tissue	Cases Exposure Route	Range	Mean	General Information
5612 Body	1	Not given	0.17 ppm Wet wt	Lake Providence, 11.1% lipids. Collected 6/15-9/25/80. Tertiary consumers, major foods are fish. Lakes acting as sumps. Louisiana GC

BODY; ENVIRONMENTAL EXPOSURE; LOUISIANA; CHLORINE ORGANIC COMPOUNDS; INSECTICIDES; BIOMAGNIFICATION; FISHES; AGRICULTURE; PESTICIDE RESIDUES; AQUATIC; TERRESTRIAL; BIRDS; SNAKES; FROGS; CRAYFISH

Niethammer, K.R.; White, D.H.; Baskett, T.S.; Sayre, M.W. 1984 Archives of Contamination and Toxicology 13:63-74

Goldeye
HIODON ALOSOIDES

Tissue	Cases Exposure Route	Range	Mean	General Information
5613 Adipose	a) 135 b) 16 c) 29 Ingestion	a) Not detected-0.081 mg/kg b) Not detected-0.086 mg/kg c) Not detected-0.040 mg/kg Wet wt	a) 0.019 mg/kg b) 0.007 mg/kg c) 0.021 mg/kg Wet wt	a) North Saskatchewan River below Edmonton b) Red Deer River below city of Red Deer c) South Saskatchewan River Intestinal fat. Canada, Alberta GC-EC

FISHES; CANADA; PESTICIDE RESIDUES; CHLORINE ORGANIC COMPOUNDS; POLYCHLORINATED BIPHENYLS; BIOLOGICAL MONITORING; AQUATIC; BIOCONCENTRATION; ENVIRONMENTAL EXPOSURE; WATER POLLUTION; POLYCHLORINATED BIPHENYLS; DDE; DDD; DIELDRIN; HEXACHLOROBENZENE; HEXACHLOROCYCLOHEXANE

Chovelon, A.; George, L.; Gulayets, C.; Hoyano, Y.; McGuinness, E.; Moore, J.; Ramamoorthy, S.; Ramamoorthy, S.; Singer, P.; Smiley, K.; Wheatly A. 1984 Chemosphere 13(1)19-32

Gull, grey-headed
LARUS CIRROCEPHALUS

Tissue	Cases Exposure Route	Range	Mean	General Information
5614 Eggs	1	Not applicable	0.06 ug/g	4 eggs analyzed. Levels appear too low to cause adverse effects. Marine species generally less contaminated than estuarine/freshwater feeders. South Africa, Eastern Cape GC/MS

BIRDS; AQUATIC; SOUTH AFRICA; CHLORINATED HYDROCARBONS; CHLORINE ORGANIC COMPOUNDS; DDE; DDT; DIELDRIN; PESTICIDES; INSECTICIDES; POLYCHLORINATED BIPHENYLS; BIOACCUMULATION; BIOINDICATORS; PESTICIDE RESIDUES; WATER POLLUTION; ENVIRONMENTAL EXPOSURE

de Kock, A.C.; Randall, R.M. 1984 Environmental Pollution (Series A) 35:193-201

1,4:5,8-Dimethanonaphthalene, 1,2,3,4,10,10-hexachloro-6,7-epoxy-1,4,4a,5,6,7,8,8a-octahydro-, endo,exo- (8 CI) 2,7:3,6-Dimethanonaphth(2,3-b)oxirene, 3,4,5,6,9,9-hexachloro-1a,2,2a,3,6,6a,7,7a-octahydro-, (1aalpha,2beta,2aalpha,3beta,6beta,6aalpha,7beta,7aalpha)- (9 CI)
60-57-1
C12-H8-Cl6-O
MW 380.93, MP 176-177 C, VP 7.78X10(E-7) mm Hg at 20 C

Gull, kelp
LARUS DOMINICANUS

Tissue	Cases Exposure Route	Range	Mean	General Information
5615 Eggs	4	0.008-0.06 ug/g	0.022 ug/g	15 eggs analyzed. Levels appear too low to cause adverse effects. Marine species generally less contaminated than estuarine/freshwater feeders. South Africa, Eastern Cape GC/MS
BIRDS; AQUATIC; SOUTH AFRICA; CHLORINATED HYDROCARBONS; CHLORINE ORGANIC COMPOUNDS; DDE; DDT; DIELDRIN; PESTICIDES; INSECTICIDES; POLYCHLORINATED BIPHENYLS; BIOACCUMULATION; BIOINDICATORS; PESTICIDE RESIDUES; WATER POLLUTION; ENVIRONMENTAL EXPOSURE de Kock, A.C.; Randall, R.M. 1984 Environmental Pollution (Series A) 35:193-201				

Heron, black-crowned night
NYCTICORAX NYCTICORAX

Tissue	Cases Exposure Route	Range	Mean	General Information
5616 Eggs	147	0.08-1.4 ppm	0.20 ppm Geometric mean	Collected between May 17 and June 1, 1979. Possible sources: nesting and feeding habitats, or migration routes and wintering grounds in Mexico. Colorado; Wyoming GC; EC
EGGS; BIRDS; ENVIRONMENTAL EXPOSURE; COLORADO; WYOMING; CHLORINE ORGANIC COMPOUNDS; DDD; DDE; DDT; DIELDRIN; HEPTACHLOR EPOXIDE; OXYCHLORDANE; NONACHLOR; HEXACHLOROBENZENE; HEXACHLOROCYCLOHEXANE; POLYCHLORINATED BIPHENYLS; ANIMAL POPULATIONS; BIOLOGICAL MONITORING; PESTICIDE RESIDUES; LAND POLLUTION; WATER POLLUTION; AQUATIC McEwen, L.C.; Stafford, C.J.; Hensler, G.L 1984 Environmental Toxicology and Chemistry 3:367-376				

Heron, green-backed
BUTORIDES STRIATUS

Tissue	Cases Exposure Route	Range	Mean	General Information
5617 Adipose	4 Ingestion	Not given	0.42 ppm Wet wt	Composite from birds shot in 1980. Residues linked to fish diet. Louisiana, Lake Providence GC; GC/MS
5618 Body	a) 12 b) 14 Ingestion	a) Not detected-0.20 ppm b) Not detected-0.91 ppm Wet wt	a) 0.05 ppm b) 0.10 ppm Wet wt Geometric means	a) Adults, mean lipid 16.2%, 6 had detectable levels b) Immature, mean lipid 14.8%, 10 had detectable levels Collected (shot) in 1980. Beak, feet, wing tips, skin, GI tract removed before homogenization. Residues linked to fish diet. Louisiana, Lake Province, Lake Bruin, Lake St. John GC; GC/MS
CHLORINE ORGANIC COMPOUNDS; FISHES; LOUISIANA; PESTICIDE RESIDUES; BIOACCUMULATION; DIETS; ADIPOSE TISSUE; LIVER; MUSCLES; BRAIN; BIOLOGICAL MONITORING; ENVIRONMENTAL EXPOSURE; BIRDS; WATERFOWL; AQUATIC; TERRESTRIAL; WATER POLLUTION; DDD; DDE; DDT; DIELDRIN; POLYCHLORINATED BIPHENYLS Niethammer, K.R.; Baskett, T.S.; White, D.H. 1984 Bulletin of Environmental Contamination and Toxicology 33:491-498				

1,4:5,8-Dimethanonaphthalene, 1,2,3,4,10,10-hexachloro-6,7-epoxy-1,4,4a,5,6,7,8,8a-octahydro-, endo,exo- (8 CI) 2,7:3,6-Dimethanonaphth(2,3-b)oxirene, 3,4,5,6,9,9-hexachloro-1a,2,2a,3,6,6a,7,7a-octahydro-, (1aalpha,2beta,2aalpha,3beta,6beta,6aalpha,7beta,7aalpha)- (9 CI)
60-57-1
C12-H8-Cl6-O
MW 380.93, MP 176-177 C, VP 7.78X10(E-7) mm Hg at 20 C

Heron, green-backed
BUTORIDES STRIATUS

Tissue	Cases Exposure Route	Range	Mean	General Information
5619 Body	a) 10 b0 5 c) 1	a) 0.05-0.91 ppm b) Not detected-0.27 ppm c) Not detected-0.91 ppm Wet wt	a) 0.15 ppm b) 0.05 ppm c) 0.05 ppm Wet wt	a) Lake Providence, 11.4% lipids b) Lake Bruin, 12.9% lipids c) Lake St. John, 26.7% lipids Collected between 6/15-9/25/80. Tertiary consumers, major foods are fish. Lakes acting as sumps. Immature birds are good monitors of contamination. Louisiana GC
BODY; ENVIRONMENTAL EXPOSURE; LOUISIANA; CHLORINE ORGANIC COMPOUNDS; INSECTICIDES; BIOMAGNIFICATION; FISHES; AGRICULTURE; PESTICIDE RESIDUES; AQUATIC; TERRESTRIAL; BIRDS; SNAKES; FROGS; CRAYFISH Niethammer, K.R.; White, D.H.; Baskett, T.S.; Sayre, M.W. 1984 Archives of Contamination and Toxicology 13:63-74				

Heron, little blue
EGRETTA CAERULEA

Tissue	Cases Exposure Route	Range	Mean	General Information
5620 Body	Ingestion	a) Not detectable-0.21 ppm b) Not detected-0.29 ppm Wet wt	a) 0.07 ppm b) 0.03 ppm Wet wt Geometric means	a) Adults, 4 had detectable levels, mean lipid 10.8% b) Immature, 4 had detectable levels, mean lipid 8.2% Collected (shot) 1980. Beak, feet, skin, wing tips and GI tracts removed before homogenization. Moderate residues linked to mixed diet of fish, crustaceans and insects. Louisana, Lake Providence, Lake Bruin, Lake St. John GC; GC/MS
CHLORINE ORGANIC COMPOUNDS; FISHES; LOUISIANA; PESTICIDE RESIDUES; BIOACCUMULATION; DIETS; ADIPOSE TISSUE; LIVER; MUSCLES; BRAIN; BIOLOGICAL MONITORING; ENVIRONMENTAL EXPOSURE; BIRDS; WATERFOWL; AQUATIC; TERRESTRIAL; WATER POLLUTION; DDD; DDE; DDT; DIELDRIN; POLYCHLORINATED BIPHENYLS Niethammer, K.R.; Baskett, T.S.; White, D.H. 1984 Bulletin of Environmental Contamination and Toxicology 33:491-498				

Tissue	Cases Exposure Route	Range	Mean	General Information
5621 Body	a) 1 b) 6 c) 1	a) Not detected-0.05 ppm b) Not detected-0.29 ppm c) Not detected-0.08 ppm Wet wt	a) 0.03 ppm b) 0.07 ppm c) 0.03 ppm Wet wt	a) Lake Providence, 3.7% lipids b) Lake Bruin, 6.0% lipids c) Lake St. John, 18.2% lipids Collected 6/15-9/25/80. Tertiary consumer, major foods are small fish and invertebrates. Lakes acting as sumps. Louisiana GC
BODY; ENVIRONMENTAL EXPOSURE; LOUISIANA; CHLORINE ORGANIC COMPOUNDS; INSECTICIDES; BIOMAGNIFICATION; FISHES; AGRICULTURE; PESTICIDE RESIDUES; AQUATIC; TERRESTRIAL; BIRDS; SNAKES; FROGS; CRAYFISH Niethammer, K.R.; White, D.H.; Baskett, T.S.; Sayre, M.W. 1984 Archives of Contamination and Toxicology 13:63-74				

1,4:5,8-Dimethanonaphthalene, 1,2,3,4,10,10-hexachloro-6,7-epoxy-1,4,4a,5,6,7,8,8a-octahydro-, endo,exo- (8 CI) 2,7:3,6-Dimethanonaphth(2,3-b)oxirene, 3,4,5,6,9,9-hexachloro-1a,2,2a,3,6,6a,7,7a-octahydro-, (1aalpha,2beta,2aalpha,3beta,6beta,6aalpha,7beta,7aalpha)- (9 CI)
60-57-1
C12-H8-Cl6-O
MW 380.93, MP 176-177 C, VP 7.78X10(E-7) mm Hg at 20 C

Heron, yellow-crowned night
NYCTICORAX VIOLACEUS

Tissue	Cases Exposure Route	Range	Mean	General Information
5622 Adipose	3 Ingestion	Not applicable	0.30 ppm Wet wt	Composite from birds shot in 1980. Low residues linked to crayfish diet. Louisiana, Lake Providence GC; GC/MS
5623 Body	13 Ingestion	Not detected-0.19 ppm Wet wt	0.08 ppm Wet wt Geometric mean	Immature, shot 1980, 2 had detectable levels. Mean lipid 8.6%. Beak, feet, skin, wing tips, and GI tract removed before homogenization. Low residues linked to crayfish diet. Louisana, Lake Providence, Lake Bruin, Lake St. John GC; GC/MS

CHLORINE ORGANIC COMPOUNDS; FISHES; LOUISIANA; PESTICIDE RESIDUES; BIOACCUMULATION; DIETS; ADIPOSE TISSUE; LIVER; MUSCLES; BRAIN; BIOLOGICAL MONITORING; ENVIRONMENTAL EXPOSURE; BIRDS; WATERFOWL; AQUATIC; TERRESTRIAL; WATER POLLUTION; DDD; DDE; DDT; DIELDRIN; POLYCHLORINATED BIPHENYLS
Niethammer, K.R.; Baskett, T.S.; White, D.H. 1984 Bulletin of Environmental Contamination and Toxicology 38:491-498

Tissue	Cases Exposure Route	Range	Mean	General Information
5624 Body	a) 1 b) 1	a) Not detected-0.19 ppm b) Not detected-0.05 ppm Wet wt	a) 0.08 ppm b) 0.04 ppm Wet wt	a) Lake Providence, 11.4% lipids b) Lake St. John, 17.4% lipids Collected 6/15-9/25/80. Secondary consumer. Lakes acting as sumps. Louisiana GC

BODY; ENVIRONMENTAL EXPOSURE; LOUISIANA; CHLORINE ORGANIC COMPOUNDS; INSECTICIDES; BIOMAGNIFICATION; FISHES; AGRICULTURE; PESTICIDE RESIDUES; AQUATIC; TERRESTRIAL; BIRDS; SNAKES; FROGS; CRAYFISH
Niethammer, K.R.; White, D.H.; Baskett, T.S.; Sayre, M.W. 1984 Archives of Contamination and Toxicology 13:63-74

Tissue	Cases Exposure Route	Range	Mean	General Information
5625 Liver	3 Ingestion	Not applicable	0.06 ppm Wet wt	Composite from birds shot in 1980. Low residues linked to crayfish diet. Louisiana, Lake Providence GC; GC/MS

CHLORINE ORGANIC COMPOUNDS; FISHES; LOUISIANA; PESTICIDE RESIDUES; BIOACCUMULATION; DIETS; ADIPOSE TISSUE; LIVER; MUSCLES; BRAIN; BIOLOGICAL MONITORING; ENVIRONMENTAL EXPOSURE; BIRDS; WATERFOWL; AQUATIC; TERRESTRIAL; WATER POLLUTION; DDD; DDE; DDT; DIELDRIN; POLYCHLORINATED BIPHENYLS
Niethammer, K.R.; Baskett, T.S.; White, D.H. 1984 Bulletin of Environmental Contamination and Toxicology 38:491-498

1,4:5,8-Dimethanonaphthalene, 1,2,3,4,10,10-hexachloro-6,7-epoxy-1,4,4a,5,6,7,8,8a-octahydro-, endo,exo- (8 CI) 2,7:3,6-Dimethanonaphth(2,3-b)oxirene, 3,4,5,6,9,9-hexachloro-1a,2,2a,3,6,6a,7,7a-octahydro-, (1aalpha,2beta,2aalpha,3beta,6beta,6aalpha,7beta,7aalpha)- (9 CI)
60-57-1
C12-H8-Cl6-O
MW 380.93, MP 176-177 C, VP 7.78X10(E-7) mm Hg at 20 C

Kite, black
MILVUS MIGRANS

Tissue	Cases Exposure Route	Range	Mean	General Information
5626 Eggs	2 Ingestion	Not given	0.006 ppm Wet wt	Collected in 1981. Spain GLC

EGGS; ENVIRONMENTAL EXPOSURE; SPAIN; ADULTS; METAL POISONING; DDE; DDD; DDT; DIELDRIN; HEXACHLOROCYCLOHEXANE; HEPTACHLOR EPOXIDE; ALDRIN; POLYCHLORINATED BIPHENYLS; MERCURY; LEAD; CADMIUM; COPPER; ZINC; BIOACCUMULATION; BIOCONCENTRATION; HEALTH HAZARDS; PESTICIDE RESIDUES; BIRDS; TERRESTRIAL
Gonzales, M.J.; Hernandez, L.M.; Rico, M.C.; Baluja, G. 1984 Journal of Environmental Health and Science

Kite, red
MILVUS MILVUS

Tissue	Cases Exposure Route	Range	Mean	General Information
5627 Eggs	a) 4 b) 2 Ingestion	a) Not given b) Not given	a) 0.023 ppm b) 0.001 ppm Wet wt	a) Collected 1981 b) 1983. Spain GLC

EGGS; ENVIRONMENTAL EXPOSURE; SPAIN; ADULTS; METAL POISONING; DDE; DDD; DDT; DIELDRIN; HEXACHLOROCYCLOHEXANE; HEPTACHLOR EPOXIDE; ALDRIN; POLYCHLORINATED BIPHENYLS; MERCURY; LEAD; CADMIUM; COPPER; ZINC; BIOACCUMULATION; BIOCONCENTRATION; HEALTH HAZARDS; PESTICIDE RESIDUES; BIRDS; TERRESTRIAL
Gonzales, M.J.; Hernandez, L.M.; Rico, M.C.; Baluja, G. 1984 Journal of Environmental Health and Science

1,4:5,8-Dimethanonaphthalene, 1,2,3,4,10,10-hexachloro-6,7-epoxy-1,4,4a,5,6,7,8,8a-octahydro-, endo,exo- (8 CI) 2,7:3,6-Dimethanonaphth(2,3-b)oxirene, 3,4,5,6,9,9-hexachloro-1a,2,2a,3,6,6a,7,7a-octahydro-, (1aalpha,2beta,2aalpha,3beta,6beta,6aalpha,7beta,7aalpha)- (9 CI)
60-57-1
C12-H8-Cl6-O
MW 380.93, MP 176-177 C, VP 7.78X10(E-7) mm Hg at 20 C

Loon, common
GAVIA IMMER

Tissue	Cases Exposure Route	Range	Mean	General Information
5628 **Adipose**	a) 21 b) 49 c) 58 d) 6 e) 13 f) 10 g) 11	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given g) Not given	a) 0.83 ug/g b) 1.92 ug/g c) 3.28 ug/g d) 11.9 ug/g e) 8.23 ug/g f) 10.7 ug/g g) 12.3+/-4.6 ug/g Wet wt	a) Healthy juveniles, 74% fat b) Healthy adult males, 66% fat c) Healthy adult females, 73% fat d) Emaciated juveniles, 67% fat e) Emaciated adult males, 54% fat f) Emaciated adult females, 56% fat g) Healthy, collected in 1978-79, 62.0+/-13.1% fat Tissues with high fat content, and emaciated birds contained higher levels. a)-f) collected in 1971-1974. Canada, Ontario, Kinoje Lake; Algonquin Park; Parry Sound GC
5629 **Brain**	a) 21 b) 49 c) 58 d) 6 e) 13 f) 10 g) 11 h) 38 i) 1	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given g) Not given h) Not given i) Not given	a) 0.01 ug/g b) 0.04 ug/g c) 0.05 ug/g d) 1.23 ug/g e) 0.48 ug/g f) 0.81 ug/g g) 0.18+/-0.10 ug/g h) 0.04+/-0.04 ug/g i) 0.80 ug/g Wet wt	a) Healthy juveniles, 6.8% fat b) Healthy adult males, 6.9% fat c) Healthy adult females, 6.9% fat d) Emaciated juveniles, 7.2% fat e) Emaciated adult males, 7.1% fat f) Emaciated adult females, 6.2% fat g) Unknown condition, 7.76+/-1.12% fat h) Healthy, 6.16+/-0.59% fat i) Emaciated, 7.13% fat Tissues with high fat content, and emaciated birds contained higher levels. a)-f) collected in 1971-74, g) in 1969 h) -i) in 1978-79. Canada, Ontario, Kinoje Lake; Algonquin Park; Parry Sound GC
5630 **Embryos**	a) 4 b) 14 c) 34 d) 15 e) 12 f) 19	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given	a) 0.24+/-0.16 ug/g b) 0.56+/-0.37 ug/g c) 1.55+/-1.57 ug/g d) 0.74+/-0.57 ug/g e) 0.08+/-0.08 ug/g f) 0.26+/-0.13 ug/g Wet wt	a) Collected in 1968 from Algonquin b) 1969 from Kinoje Lake c) 1970, Algonquin d) 1972, from Algonquin-Parry Sound e) 1978, Algonquin-Parry Sound f) 1979-1980, Algonquin-Parry Sound. Canada, Ontario, Kinoje Lake; Algonquin Park; Parry Sound GC

(next page)

1,4:5,8-Dimethanonaphthalene, 1,2,3,4,10,10-hexachloro-6,7-epoxy-1,4,4a,5,6,7,8,8a-octahydro-, endo,exo- (8 CI) 2,7:3,6-Dimethanonaphth(2,3-b)oxirene, 3,4,5,6,9,9-hexachloro-1a,2,2a,3,6,6a,7,7a-octahydro-, (1aalpha,2beta,2aalpha,3beta,6beta,6aalpha,7beta,7aalpha)- (9 CI)
60-57-1
C12-H8-Cl6-O
MW 380.93, MP 176-177 C, VP 7.78X10(E-7) mm Hg at 20 C

Loon, common
GAVIA IMMER

(continued)

Tissue	Cases Exposure Route	Range	Mean	General Information
5631 Feathers	103	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given g) Not given h) Not given	a) <0.01 mg/kg b) 0.01 mg/kg c) 0.03 mg/kg d) 0.01 mg/kg e) 0.38 mg/kg f) 0.12 mg/kg g) 0.02 mg/kg h) 0.01 mg/kg Wet wt	a) From back of healthy juveniles, 4.3% fat b) From belly of healthy juveniles, 2.0% fat c) From back of healthy adults, 2.2% fat d) From belly of healthy adults, 1.5% fat e) From back of emaciated juveniles, 3.3% fat f) From belly of emaciated juveniles, 0.3% fat g) From back of emaciated adults, 0.5% fat h) From belly of emaciated adults, 0.3 % fat Tissues with high fat content, and emaciated birds contained higher levels. Collected in 1971-74. Canada, Ontario, Kinoje Lake; Algonquin Park; Parry Sound GC
5632 Gizzard	a) 8 b) 13 c) 10	a) Not given b) Not given c) Not given	a) 0.03+/-0.03 mg/kg b) 0.08+/-0.12 mg/kg c) 0.18+/-0.26 mg/kg Wet wt	a) 2.9+/-2.6% fat in healthy juveniles b) 2.8+/-3.0% fat in healthy adults c) 1.1+/-1.6% fat in emaciated adults Tissues with high fat content, and emaciated contained higher levels. Collected in 1971-74. Canada, Ontario, Kinoje Lake; Algonquin Park; Parry Sound GC
5633 Heart	a) 8 b) 13 c) 10	a) Not given b) Not given c) Not given	a) 0.02+/-0.04 mg/kg b) 0.05+/-0.04 mg/kg c) 0.07+/-0.05 mg/kg Wet wt	a) 5.3+/-2.4% fat in healthy juveniles b) 4.4+/-2.7% fat in healthy adults c) 1.1+/-1.3% fat in emaciated adults Tissues with high fat content, and emaciated contained higher levels. Collected in 1971-74. Canada, Ontario, Kinoje Lake; Algonquin Park; Parry Sound GC
5634 Intestine	a) 8 b) 13 c) 10	a) Not given b) Not given c) Not given	a) 0.07+/-0.11 mg/kg b) 0.17+/-0.22 mg/kg c) 0.34+/-0.51 mg/kg Wet wt	a) 6.4+/-8.2% fat in healthy juveniles b) 4.9+/-3.9% fat in healthy adults c) 2.9+/-3.8% fat in emaciated adults Tissues with high fat content, and emaciated contained higher levels. Collected in 1971-74. Canada, Ontario, Kinoje Lake; Algonquin Park; Parry Sound GC
5635 Kidney	a) 8 b) 13 c) 10	a) Not given b) Not given c) Not given	a) <0.01 mg/kg b) 0.01 mg/kg c) 0.31+/-0.37 mg/kg Wet wt	a) 3.1+/-1.6% fat in healthy juveniles b) 1.6+/-1.5% fat in healthy adults c) 1.2+/-0.5% fat in emaciated adults Tissues with high fat content, and emaciated contained higher levels. Collected in 1971-74. Canada, Ontario, Kinoje Lake; Algonquin Park; Parry Sound GC

(next page)

1,4:5,8-Dimethanonaphthalene, 1,2,3,4,10,10-hexachloro-6,7-epoxy-1,4,4a,5,6,7,8,8a-octahydro-, endo,exo- (8 CI) 2,7:3,6-Dimethanonaphth(2,3-b)oxirene, 3,4,5,6,9,9-hexachloro-1a,2,2a,3,6,6a,7,7a-octahydro-, (1aalpha,2beta,2aalpha,3beta,6beta,6aalpha,7beta,7aalpha)- (9 CI)
60-57-1
C12-H8-Cl6-O
MW 380.93, MP 176-177 C, VP 7.78X10(E-7) mm Hg at 20 C

Loon, common
GAVIA IMMER

(continued)

Tissue	Cases Exposure Route	Range	Mean	General Information
5636 Liver	a) 21 b) 49 c) 58 d) 6 e) 13 f) 10	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given	a) 0.02 ug/g b) 0.10 ug/g c) 0.07 ug/g d) 0.79 ug/g e) 0.41 ug/g f) 1.01 ug/g Wet wt	a) Healthy juveniles, 2.6% fat b) Healthy adult males, 3.5% fat c) Healthy adult females, 3.6% fat d) Emaciated juveniles, 2.0% fat e) Emaciated adult males, 3.3% fat f) Emaciated adult females, 1.7% fat Adults with higher levels than juveniles. Tissues with high fat contents, and emaciated birds contained higher levels. Collected in 1971-74. Canada, Ontario, Kinoje Lake; Algonquin Park; Parry Sound GC
5637 Lung	a) 8 b) 13 c) 10	a) Not given b) Not given c) Not given	a) <0.01 mg/kg b) 0.01 mg/kg c) 0.04+/-0.01 mg/kg Wet wt	a) 2.0+/-1.0% fat in healthy juveniles b) 1.2+/-0.7% fat in healthy adults c) 0.4+/-0.1% fat in emaciated adults Tissues with high fat content, and emaciated contained higher levels. Collected in 1971-74. Canada, Ontario, Kinoje Lake; Algonquin Park; Parry Sound GC
5638 Muscle	a) 21 b) 49 c) 58 d) 6 e) 13 f) 10 g) 21	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given g) Not given	a) 0.06 ug/g b) 0.09 ug/g c) 0.11 ug/g d) 0.13 ug/g e) 0.16 ug/g f) 0.24 ug/g g) 0.09+/-0.09 ug/g Wet wt	a) Healthy juveniles, 3.4% fat b) Healthy adult males, 4.4% fat c) Healthy adult females, 4.4% fat d) Emaciated juveniles, 0.5% fat e) Emaciated adult males, 1.2% fat f) Emaciated adult females, 0.3% fat g) Healthy, collected in 1978-79, 2.59+/-1.16% fat Tissues with high fat content, and emaciated birds contained higher levels. a)-f) collected in 1971-1974. Canada, Ontario, Kinoje Lake; Algonquin Park; Parry Sound GC
5639 Uropygial gland	a) 15 b) 72 c) 3 d) 13	a) Not given b) Not given c) Not given d) Not given	a) 0.63 ug/g b) 1.34 ug/g c) 1.22 ug/g d) 4.42 ug/g Wet wt	a) Healthy juveniles, 34% fat b) Healthy adults, 36% fat c) Emaciated juveniles, 25% fat d) Emaciated adults, 27% fat Tissues with high fat content, and emaciated birds contained higher levels. Residues could be lost through this gland. Collected in 1971-74. Canada, Ontario, Kinoje Lake; Algonquin Park; Parry Sound GC

(next page)

1,4:5,8-Dimethanonaphthalene, 1,2,3,4,10,10-hexachloro-6,7-epoxy-1,4,4a,5,6,7,8,8a-octahydro-, endo,exo- (8 CI) 2,7:3,6-Dimethanonaphth(2,3-b)oxirene, 3,4,5,6,9,9-hexachloro-1a,2,2a,3,6,6a,7,7a-octahydro-, (1aalpha,2beta,2aalpha,3beta,6beta,6aalpha,7beta,7aalpha)- (9 CI)
60-57-1
C12-H8-Cl6-O
MW 380.93, MP 176-177 C, VP 7.78X10(E-7) mm Hg at 20 C

Loon, common
GAVIA IMMER

(continued)

Tissue	Cases Exposure Route	Range	Mean	General Information
5640 Uropygial oil	a) 15 b) 72 c) 5 d) 13	a) Not given b) Not given c) Not given d) Not given	a) 0.34 ug/g b) 1.06 ug/g c) 2.54 ug/g d) 5.82 ug/g Wet wt	a) Healthy juveniles, 42% fat b) Healthy adults, 51% fat c) Emaciated juveniles, 65% fat d) Emaciated adults, 33% fat Tissues with high fat content, and emaciated birds contained higher levels. Residues could be lost through this gland. Collected in 1971-74. Canada, Ontario, Kinoje Lake; Algonquin Park; Parry Sound GC

EGGS; BRAIN; ADIPOSE TISSUE; LIVER; MUSCLES; FEATHERS; INTESTINES; EMBRYOS; DDT; DDE; DIELDRIN; HEPTACHLOR EPOXIDE; POLYCHLORINATED BIPHENYLS; HEXACHLOROBENZENE; MERCURY; CHLORINE ORGANIC COMPOUNDS; PESTICIDES; PESTICIDE RESIDUES; BIOINDICATORS; BIOLOGICAL MONITORING; BIOACCUMULATION; LUNGS; GIZZARD; BLOOD; HEART; KIDNEYS
Frank, R.; Lumsden, H.; Barr, J.F.; Braun, H.E. 1983 Archives of Environmental Contamination and Toxicology 12:641-654

Mackerel
SCOMBEROMUS MUCULATUS

Tissue	Cases Exposure Route	Range	Mean	General Information
5641 Muscle	a) 4 b) 5	a) Not given b) Not given	a) 5.73 ppb b) 0.50 ppb Wet wt	a) 10/80 b) 1/81 Mexico (NW), Sonora, Yavaros lagoon system GC

CRUSTACEANS; MOLLUSKS; MUSCLES; CHLORINE ORGANIC COMPOUNDS; MEXICO; BODY; BIOACCUMULATION; FISHES; PESTICIDE RESIDUES; WATER POLLUTION; AQUATIC; ENVIRONMENTAL EXPOSURE
Rosales, M.T.L.; Escalona, R.L. 1983 Bulletin of Environmental Contamination and Toxicology 30:456-463

Merganser, red-breasted
MERGUS SERRATOR

Tissue	Cases Exposure Route	Range	Mean	General Information
5642 Eggs	a) 49 b) 49	a) Not applicable b) Not applicable	a) 0.73 ppm b) 0.65 ppm Wet wt Geometric means	a) Randomly selected b) Unhatched Collected 1977, pairs from same nests analyzed. No significant difference. Lower limit 0.1 ppm. Lake Michigan, northwestern islands GLC

EGGS; AQUATIC; BIRDS; WATERFOWL; ENVIRONMENTAL EXPOSURE; GREAT LAKES; BROMINATED HYDROCARBONS; CHLORINATED HYDROCARBONS; BROMINE ORGANIC COMPOUNDS; CHLORINE ORGANIC COMPOUNDS; DDE; DDT; DIELDRIN; HEPTACHLOR EPOXIDE; HEXACHLOROBENZENE; INSECTICIDES; MERCURY; NONACHLOR; OXYCHLORDANE; PESTICIDES; POLYBROMINATED BIPHENYLS; POLYCHLORINATED BIPHENYLS; BIOACCUMULATION
Haseltine, S.D.; Heinz, G.H.; Hensler, G.L.; Reichel, W.L. 1983 Environmental Pollution 32:211-232

1,4:5,8-Dimethanonaphthalene, 1,2,3,4,10,10-hexachloro-6,7-epoxy-1,4,4a,5,6,7,8,8a-octahydro-, endo,exo- (8 CI) 2,7:3,6-Dimethanonaphth(2,3-b)oxirene, 3,4,5,6,9,9-hexachloro-1a,2,2a,3,6,6a,7,7a-octahydro-, (1aalpha,2beta,2aalpha,3beta,6beta,6aalpha,7beta,7aalpha)- (9 CI)
60-57-1
C12-H8-Cl6-O
MW 380.93, MP 176-177 C, VP 7.78X10(E-7) mm Hg at 20 C

Mosquitofish
GAMBUSIA AFFINIS

Tissue	Cases Exposure Route	Range	Mean	General Information
5643 Body	1	Not detected-0.06 ppm Wet wt	0.03 ppm Wet wt	Lake Providence, 2.6% lipids. Collected 6/15-9/25/80. Secondary consumers, major foods are small invertebrates. Lakes acting as sumps. Louisiana GC
BODY; ENVIRONMENTAL EXPOSURE; LOUISIANA; CHLORINE ORGANIC COMPOUNDS; INSECTICIDES; BIOMAGNIFICATION; FISHES; AGRICULTURE; PESTICIDE RESIDUES; AQUATIC; TERRESTRIAL; BIRDS; SNAKES; FROGS; CRAYFISH				
Niethammer, K.R.; White, D.H.; Baskett, T.S.; Sayre, M.W. 1984 Archives of Contamination and Toxicology 13:63-74				

Mullet, striped
MUGIL CEPHALUS

Tissue	Cases Exposure Route	Range	Mean	General Information
5644 Muscle	a) 3 b) 3 c) 11 d) 3 e) 6 f) 4	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given	a) 6.33 ppb b) 5.64 ppb c) 1.80 ppb d) 5.60 ppb e) 7.60 ppb f) 1.00 ppb Wet wt	a) Moron carit, 7/80 b) Moron carit, 7/81 c) Yavaros, 10/80 d) Yavaros, 1/81 e) Yavaros, 4/81 f) Caimanero, 1/81. Mexico (NW), Sonora, Yavoros lagoon system; Mexico (NW), Sinaloa, Huisache-Caimanero lagoon system GC
CRUSTACEANS; MOLLUSKS; MUSCLES; CHLORINE ORGANIC COMPOUNDS; MEXICO; BODY; BIOACCUMULATION; FISHES; PESTICIDE RESIDUES; WATER POLLUTION; AQUATIC; ENVIRONMENTAL EXPOSURE				
Rosales, M.T.L.; Escalona, R.L. 1983 Bulletin of Environmental Contamination and Toxicology 30:456-463				

Mullet, white
MUGIL CUREMA

Tissue	Cases Exposure Route	Range	Mean	General Information
5645 Muscle	4	Not given	10.50 ppb Wet wt	Collected 1/81. Mexico (NW), Sonora, Yavaros lagoon system GC
CRUSTACEANS; MOLLUSKS; MUSCLES; CHLORINE ORGANIC COMPOUNDS; MEXICO; BODY; BIOACCUMULATION; FISHES; PESTICIDE RESIDUES; WATER POLLUTION; AQUATIC; ENVIRONMENTAL EXPOSURE				
Rosales, M.T.L.; Escalona, R.L. 1983 Bulletin of Environmental Contamination and Toxicology 30:456-463				

1,4:5,8-Dimethanonaphthalene, 1,2,3,4,10,10-hexachloro-6,7-epoxy-1,4,4a,5,6,7,8,8a-octahydro-, endo,exo- (8 CI) 2,7:3,6-Dimethanonaphth(2,3-b)oxirene, 3,4,5,6,9,9-hexachloro-1a,2,2a,3,6,6a,7,7a-octahydro-, (1aalpha,2beta,2aalpha,3beta,6beta,6aalpha,7beta,7aalpha)- (9 CI)
60-57-1
C12-H8-Cl6-O
MW 380.93, MP 176-177 C, VP 7.78X10(E-7) mm Hg at 20 C

Owl, barn
TYTO ALBA

Tissue	Cases Exposure Route	Range	Mean	General Information
5646 Body	a) 2 b) 2 c) 9 d) 6 e) 12 f) 7 g) 6 h) 5 Ingestion	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given g) Not given h) Not given	a) 0.33 +or- 0.25 ppm b) 0.15 +or- 0.12 ppm c) 0.23 +or- 0.14 ppm d) 0.30 +or- 0.14 ppm e) 9.6 +or- 0.17 ppm f) 9.2 +or- 0.12 ppm g) 12.0 +or- 0.13 ppm h) 7.8 +or- 0.20 pp Wet wt Geometric means	a) Controls, male b) Controls, female c) 3 ppm DDE, male d) 3 ppm DDE, female e) 0.5 ppm Dieldrin, male f) 0.5 ppm Dieldrin, female g) 0.3 ppm DDE + 0.5 ppm Dieldrin, male h) 0.3 ppm DDE + 0.5 ppm Dieldrin, female Levels in diet for 2 yr. Experienced (age 1.5-6 yr) and inexperienced (age 5-10 mo) breeders from captive colony. GC-EC
5647 Eggs	a) 13 b) 9 c) 8 d) 13 e) 10 f) 13 g) 11 h) 10 Ingestion	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given g) Not given h) Not given	a) 0.31 +or- 0.061 ppm b) 0.13 +or- 0.033 ppm c) 3.6 +or- 0.26 ppm d) 4.2 +or- 0.041 ppm e) 0.20 +or- 0.47 ppm f) 0.23 +or- 0.025 ppm g) 8.1 +or- 0.036 ppm h) 9.0 +or- 0.054 ppm Wet wt Geometric means	a) Controls, shell thickness (ST) 0.278 mm b) 3 ppm DDE, ST 0.223 mm c) 0.5 ppm Dieldrin, ST 0.269 mm d) 3 ppm DDE + 0.5 ppm Dieldrin, ST 0.220 mm e) Controls, ST 0.288 mm f) 3 ppm DDE, ST 0.207 mm g) 0.5 pp Dieldrin, ST 0.272 mm h) 3 ppm DDE + 0.5 ppm Dieldrin, ST 0.206 mm Levels in diet for 2 yr, a)-d) 1975, d)-h) 1976. 3rd egg of 1st clutch in each yr. Experienced (age 1.5-6 yr) and inexperienced (age 5-10 mo) breeders from captive colony. DDE associated with significant shell thinning, egg breakage, embryo mortality, and reduction of production/pair. Dieldrin associated only with slight shell thinning. GC-EC

BIRDS; EGGS; MARYLAND; ADULTS; BODY; DDE; DIELDRIN; BIOACCUMULATION

Mendenhall, V.M.; Klaas, E.E.; McLane, M.A.R. 1983 Archives of Environmental Contamination and Toxicology 12:235-240

1,4:5,8-Dimethanonaphthalene, 1,2,3,4,10,10-hexachloro-6,7-epoxy-1,4,4a,5,6,7,8,8a-octahydro-, endo,exo- (8 CI) 2,7:3,6-Dimethanonaphth(2,3-b)oxirene, 3,4,5,6,9,9-hexachloro-1a,2,2a,3,6,6a,7,7a-octahydro-, (1aalpha,2beta,2aalpha,3beta,6beta,6aalpha,7beta,7aalpha)- (9 CI)
60-57-1
C12-H8-Cl6-O
MW 380.93, MP 176-177 C, VP 7.78X10(E-7) mm Hg at 20 C

Oyster, American
CRASSOSTREA VIRGINICA

Tissue	Cases Exposure Route	Range	Mean	General Information
5648 Body	a) 213 b) 138 c) 96 d) 262 e) 379 Ingestion	a) Not detected-0.030 ug/g b) Not detected-0.010 ug/g c) Not detected-0.010 ug/g d) Not detected-0.010 ug/g e) Not detected-0.010 ug/g Wet wt	a) 0.010 ug/g b) 0.008 ug/g c) 0.008 ug/g d) 0.002 ug/g e) 0.001 ug/g Wet wt	a) 1976 b) 1977 c) 1978 d) 1979 e) 1980 Biological monitoring for organochlorine residues in shellfish, 1976-1980. Virtually all values below FDA guidelines or safe levels. DDT metabolites (DDE, DDD) and chlordane decrease after 1976. Maryland, Chesapeake Bay area, tributaries GC-EC
CLAMS; CRABS; SHELLFISH; OYSTERS; MARYLAND; CHESAPEAKE BAY; BIOLOGICAL MONITORING; BIOCONCENTRATION; WATER POLLUTION; FOOD CONTAMINATION; CHLORINE ORGANIC COMPOUNDS; DDD; DDE; POLYCHLORINATED BIPHENYLS; CHLORDANE; DIELDRIN; BHC; AQUATIC; ENVIRONMENTAL EXPOSURE Eisenberg, M.; Topping, J.J. 1984 Journal of Environmental Science and Health B19(7):673-688				

Oystercatcher, African black
HAEMATOPUS MOQUINI

Tissue	Cases Exposure Route	Range	Mean	General Information
5649 Eggs	3	0.005-0.006 ug/g	0.005 ug/g	5 eggs analysed. Levels appear too low to cause adverse effects. Marine species generally less contaminated than estuarine/freshwater feeders. South Africa, Eastern Cape GC/MS
BIRDS; AQUATIC; SOUTH AFRICA; CHLORINATED HYDROCARBONS; CHLORINE ORGANIC COMPOUNDS; DDE; DDT; DIELDRIN; PESTICIDES; INSECTICIDES; POLYCHLORINATED BIPHENYLS; BIOACCUMULATION; BIOINDICATORS; PESTICIDE RESIDUES; WATER POLLUTION; ENVIRONMENTAL EXPOSURE de Kock, A.C.; Randall, R.M. 1984 Environmental Pollution (Series A) 35:193-201				

Pike, northern
ESOX LUCIUS

Tissue	Cases Exposure Route	Range	Mean	General Information
5650 Adipose	a) 50 b) 7 Ingestion	a) Not detected-0.036 mg/kg b) 0.012-0.036 mg/kg Wet wt	a) 0.002 mg/kg b) 0.022 mg/kg	a) North Saskatchewan River below Edmonton b) McGregor Lake Intestinal fat. Canada, Alberta GC-EC
FISHES; CANADA; PESTICIDE RESIDUES; CHLORINE ORGANIC COMPOUNDS; POLYCHLORINATED BIPHENYLS; BIOLOGICAL MONITORING; AQUATIC; BIOCONCENTRATION; ENVIRONMENTAL EXPOSURE; WATER POLLUTION; POLYCHLORINATED BIPHENYLS; DDE; DDD; DIELDRIN; HEXACHLOROBENZENE; HEXACHLOROCYCLOHEXANE Chovelon, A.; George, L.; Gulayets, C.; Hoyano, Y.; McGuinness, E.; Moore, J.; Ramamoorthy, S.; Ramamoorthy, S.; Singer, P.; Smiley, K.; Wheatly A. 1984 Chemosphere 13(1)19-32				

1,4:5,8-Dimethanonaphthalene, 1,2,3,4,10,10-hexachloro-6,7-epoxy-1,4,4a,5,6,7,8,8a-octahydro-, endo,exo- (8 CI) 2,7:3,6-Dimethanonaphth(2,3-b)oxirene, 3,4,5,6,9,9-hexachloro-1a,2,2a,3,6,6a,7,7a-octahydro-, (1aalpha,2beta,2aalpha,3beta,6beta,6aalpha,7beta,7aalpha)- (9 CI)
60-57-1
C12-H8-Cl6-O
MW 380.93, MP 176-177 C, VP 7.78X10(E-7) mm Hg at 20 C

Puffin
FRATERCULA ARCTICA

Tissue	Cases Exposure Route	Range	Mean	General Information
5651 Uropygial gland	8 Ingestion	43-3407 ppb	1190 ppb	Collected at Hornoy 7/82. Norway GC

LIVER; BRAIN; UROPYGIAL GLAND; EGGS; WATERFOWL; AQUATIC; ENVIRONMENTAL EXPOSURE; NORWAY; ADULTS; JUVENILES; ALDRIN; DDE; HEXACHLOROBENZENE; POLYCHLORINATED BIPHENYLS; HEXACHLOROCYCLOHEXANE; DIELDRIN; PESTICIDES; BIOACCUMULATION; FOOD CONTAMINATION; WATER POLLUTION; INDUSTRIAL POLLUTION; PESTICIDE RESIDUES

Ingebrigtsen, K.; Skaare, J.U.; Teigen, S.W. 1984 Journal of Toxicology and Environmental Health 14:813-828

Robin
TURDUS MIGRATORIUS

Tissue	Cases Exposure Route	Range	Mean	General Information
5652 Brain	2	<0.0001-0.0061 ppm	0.0013 ppm	None in 4 birds (same species). Levels lower than in woodcock or mourning doves. Illinois, Vermilion and Shelby Counties GC-EC
5653 Heart	1	<0.0001-0.0066 ppm	0.0017 ppm	None in 3 birds (same species). Levels lower than in woodcock or mourning doves. Illinois, Vermilion and Shelby Counties GC-EC
5654 Liver	3	<0.0001-0.0098 ppm	0.0026 ppm	None in 2 birds (same species). Levels lower than in woodcock or mourning doves. Illinois, Vermilion and Shelby Counties GC-EC
5655 Muscle	3	<0.0001-0.0162 ppm	0.0032 ppm	None in 3 birds (same species). Levels lower than in woodcock or mourning doves. Illinois, Vermilion and Shelby Counties GC-EC

ADIPOSE TISSUE; BRAIN; MUSCLES; LIVER; HEART; TERRESTRIAL; BIRDS; ENVIRONMENTAL EXPOSURE; ILLINOIS; CHLORINATED HYDROCARBONS; CHLORINE ORGANIC COMPOUNDS; DDE; DIELDRIN; HEPTACHLOR EPOXIDE; INSECTICIDES; PESTICIDES; POLYCHLORINATED BIPHENYLS; BIOACCUMULATION; FOOD CONTAMINATION; PESTICIDE RESIDUES

Edwards, W.R.; Dusan, R.E.; Siemers, R.J. 1983 Bulletin of Environmental Contamination and Toxicology 31:407-414

1,4:5,8-Dimethanonaphthalene, 1,2,3,4,10,10-hexachloro-6,7-epoxy-1,4,4a,5,6,7,8,8a-octahydro-, endo,exo- (8 CI) 2,7:3,6-Dimethanonaphth(2,3-b)oxirene, 3,4,5,6,9,9-hexachloro-1a,2,2a,3,6,6a,7,7a-octahydro-, (1aalpha,2beta,2aalpha,3beta,6beta,6aalpha,7beta,7aalpha)- (9 CI)
60-57-1
C12-H8-Cl6-O
MW 380.98, MP 176-177 C, VP 7.78X10(E-7) mm Hg at 20 C

Sauger
STIZOSTEDION CANADENSE

Tissue	Cases Exposure Route	Range	Mean	General Information
5656 Adipose	a) 28 b) 32 c) 27 Ingestion	a) Not detected-0.010 mg/kg b) 0.026-0.063 mg/kg c) 0.006-0.087 mg/kg Wet wt	a) 0.007 mg/kg b) 0.042 mg/kg c) 0.024 mg/kg Wet wt	a) Red Deer River, below city of Red Deer b) South Saskatchewan River c) Oldman River Intestinal fat. Lindane (gamma-BHC), detected in c), widely used pesticide. Canada, Alberta GC-EC

FISHES; CANADA; PESTICIDE RESIDUES; CHLORINE ORGANIC COMPOUNDS; POLYCHLORINATED BIPHENYLS; BIOLOGICAL MONITORING; AQUATIC; BIOCONCENTRATION; ENVIRONMENTAL EXPOSURE; WATER POLLUTION; POLYCHLORINATED BIPHENYLS; DDE; DDD; DIELDRIN; HEXACHLOROBENZENE; HEXACHLOROCYCLOHEXANE

Chovelon, A.; George, L.; Gulayets, C.; Hoyano, Y.; McGuinness, E.; Moore, J.; Ramamoorthy, S.; Ramamoorthy, S.; Singer, P.; Smiley, K.; Wheatly A. 1984 Chemosphere 13(1)19-32

Seal, harp
PHOCA GROENLANDICA

Tissue	Cases Exposure Route	Range	Mean	General Information
5657 Adipose	227 Ingestion	a) Not given b) Not given c) Not given d) Not given	a) 0.13+/-0.11 mg/kg b) 0.13+/-0.10 mg/kg c) 0.15+/-0.14 mg/kg d) 0.16+/-0.12 mg/kg	a) Males b) Females c) Males, extractable fat d) Females, extractable fat 1976-78 annual hunt. Statistical analyses included age, site, residue, tissue correlations. Blubber greatest accumulator. Males accumulated with age. Adult males Gulf of St. Lawrence highest levels, accumulation with age for males at Gulf gave r-value of 0.81. Canada; Greenland; Northwest Atlantic; Arctic GC-EC
5658 Brain	79 Ingestion	a) Not given b) Not given c) Not given d) Not given	a) Not detected b) Not detected c) 0.01+/-0.01 mg/kg d) 0.01+/-0.01 mg/kg	a) Males b) Females c) Males, extractable fat d) Females, extractable fat 1976-78 annual hunt. Statistical analyses included age, site, residue, tissue correlations. Males accumulated with age. r-value of 0.95 for accumulation with age for males at Gulf of St. Lawrence. Canada; Greenland; Northwest Atlantic; Arctic GC-EC

(next page)

1,4:5,8-Dimethanonaphthalene, 1,2,3,4,10,10-hexachloro-6,7-epoxy-1,4,4a,5,6,7,8,8a-octahydro-, endo,exo- (8 CI) 2,7:3,6-Dimethanonaphth(2,3-b)oxirene, 3,4,5,6,9,9-hexachloro-1a,2,2a,3,6,6a,7,7a-octahydro-, (1aalpha,2beta,2aalpha,3beta,6beta,6aalpha,7beta,7aalpha)- (9 CI)
60-57-1
C12-H8-Cl6-O
MW 380.93, MP 176-177 C, VP 7.78X10(E-7) mm Hg at 20 C

Seal, harp
PHOCA GROENLANDICA

(continued)

Tissue	Cases Exposure Route	Range	Mean	General Information
5659 Kidney	118 Ingestion	a) Not given b) Not given c) Not given d) Not given	a) Not detected b) Not detected c) 0.17+/-0.43 mg/kg d) 0.07+/-0.10 mg/kg	a) Males b) Females c) Males, extractable fat d) Females, extractable fat 1976-78 annual hunt. Statistical analyses included age, site, residue, tissue correlations. Canada; Greenland; Northwest Atlantic; Arctic GC-EC
5660 Liver	114 Ingestion	a) Not given b) Not given c) Not given d) Not given	a) Not detected b) Not detected c) 0.15+/-0.20 mg/kg d) 0.07+/-0.09 mg/kg	a) Males b) Females c) Males, extractable fat d) Females, extractable fat 1976-78 annual hunt. Statistical analyses included age, site, residue, tissue correlations. Males accumulated with age. r-value of 0.87 for accumulation with age for males at Gulf of St. Lawrence. Canada; Greenland; Northwest Atlantic; Arctic GC-EC
5661 Muscle	114 Ingestion	a) Not given b) Not given c) Not given d) Not given	a) 0.00+/-0.01 mg/kg b) Not detected c) 0.14+/-0.25 mg/kg d) 0.05+/-0.08 mg/kg	a) Males b) Females c) Males, extractable fat d) Females, extractable fat 1976-78 annual hunt. Statistical analyses included age, site, residue, tissue correlations. r-value of 0.61 for accumulation with age for males at Gulf of St. Lawrence. Canada; Greenland; Northwest Atlantic; Arctic GC-EC

SEALS; CHLORINE ORGANIC COMPOUNDS; ADIPOSE TISSUE; BLOOD; BRAIN; LIVER; KIDNEYS; MUSCLES; DDT; DIELDRIN; HEXACHLOROBENZENE; HEPTACHLOR EPOXIDE; ATLANTIC; ARCTIC; CANADA; BIOACCUMULATION; PESTICIDE RESIDUES; BIOLOGICAL MONITORING; AGE; GREENLAND; POLYCHLORINATED BIPHENYLS; SEX; METABOLITES; DDE; ENVIRONMENTAL EXPOSURE; WATER POLLUTION

Ronald, K.; Frank, R.J.; Dougan, J.L.; Frank, R.; Braun, H.E. 1984 Science of the Total Environment 38:133-152

1,4:5,8-Dimethanonaphthalene, 1,2,3,4,10,10-hexachloro-6,7-epoxy-1,4,4a,5,6,7,8,8a-octahydro-, endo,exo- (8 CI) 2,7:3,6-Dimethanonaphth(2,3-b)oxirene, 3,4,5,6,9,9-hexachloro-1a,2,2a,3,6,6a,7,7a-octahydro-, (1aalpha,2beta,2aalpha,3beta,6beta,6aalpha,7beta,7aalpha)- (9 CI)
60-57-1
C12-H8-Cl6-O
MW 380.93, MP 176-177 C, VP 7.78X10(E-7) mm Hg at 20 C

Shrimp, blue
PENAEUS STYLIROSTRIS

Tissue	Cases Exposure Route	Range	Mean	General Information
5662 Body	a) 12 b) 15 c) 51 d) 18	a) Not given b) Not given c) Not given d) Not given	a) 5.87 ppb b) 1.40 ppb c) 0.82 ppb d) 1.06 ppb Wet wt	a) Moron carit, 7/80 b) Yavaros, 10/80 c) Yavaros, 10/81 d) Caimanero 1/81. Mexico (NW), Sonora, Yavaros lagoon system; Mexico (NW), Sinaloa, Huizache-Caimanero lagoon system GC
CRUSTACEANS; MOLLUSKS; MUSCLES; CHLORINE ORGANIC COMPOUNDS; MEXICO; BODY; BIOACCUMULATION; FISHES; PESTICIDE RESIDUES; WATER POLLUTION; AQUATIC; ENVIRONMENTAL EXPOSURE Rosales, M.T.L.; Escalona, R.L. 1983 Bulletin of Environmental Contamination and Toxicology 30:456-463				

Shrimp, rock
TRACHYPENAEUS SIMILIS PACIFICUS

Tissue	Cases Exposure Route	Range	Mean	General Information
5663 Body	2	Not given	1.06 ppb Wet wt	Collected 1/81. Mexico (NW), Sonora, Yavaros lagoon system GC
CRUSTACEANS; MOLLUSKS; MUSCLES; CHLORINE ORGANIC COMPOUNDS; MEXICO; BODY; BIOACCUMULATION; FISHES; PESTICIDE RESIDUES; WATER POLLUTION; AQUATIC; ENVIRONMENTAL EXPOSURE Rosales, M.T.L.; Escalona, R.L. 1983 Bulletin of Environmental Contamination and Toxicology 30:456-463				

Shrimp, white
PENAEUS VANAMEI

Tissue	Cases Exposure Route	Range	Mean	General Information
5664 Body	a) 12 b) 12	a) Not given b) Not given	a) 2.04 ppb b) 1.88 ppb Wet wt	a) Caimanero, 10/80 b) Moron carit, 7/81. Mexico (NW), Sonora, Yavaros lagoon system, Mexico (NW), Sinaloa, Huizache-Caimanero lagoon system GC
CRUSTACEANS; MOLLUSKS; MUSCLES; CHLORINE ORGANIC COMPOUNDS; MEXICO; BODY; BIOACCUMULATION; FISHES; PESTICIDE RESIDUES; WATER POLLUTION; AQUATIC; ENVIRONMENTAL EXPOSURE Rosales, M.T.L.; Escalona, R.L. 1983 Bulletin of Environmental Contamination and Toxicology 30:456-463				

1,4:5,8-Dimethanonaphthalene, 1,2,3,4,10,10-hexachloro-6,7-epoxy-1,4,4a,5,6,7,8,8a-o ctahydro-, endo,exo- (8 CI) 2,7:3,6-Dimethanonaphth(2,3-b)oxirene, 3,4,5,6,9,9-hexachloro-1a,2,2a,3,6,6a,7,7a-o ctahydro-, (1aalpha,2beta,2aalpha,3beta,6beta,6aalpha,7beta,7aalpha)- (9 CI)
60-57-1
C12-H8-Cl6-O
MW 380.93, MP 176-177 C, VP 7.78X10(E-7) mm Hg at 20 C

Snake, water
NERODIA (NATRIX) RHOMBIFERA

Tissue	Cases Exposure Route	Range	Mean	General Information
5665 Adipose	21	0.24-0.58 ppm	Not given	Thomas Point, Brusly and Belle Helene sites, collected between 1977 & 79. Residue detected in 18 of 21. Range of means. Louisiana, Mississippi River, near Baton Rouge GC-EC

ADIPOSE TISSUE; LIVER; MUSCLES; BODY; SNAKES; AQUATIC; ENVIRONMENTAL EXPOSURE; LOUISIANA; CHLORINE ORGANIC COMPOUNDS; LINDANE; ALDRIN; DIELDRIN; HEPTACHLOR EPOXIDE; HEXACHLOROBENZENE; DDT; DDE; DDE; POLYCHLORINATED BIPHENYLS; FISHES; AGRICULTURE; BIOMAGNIFICATION; BIO-CONCENTRATION; PESTICIDE RESIDUES; WATER POLLUTION
Sabourin, T.D.; Stickle, W.B.; Michot, C.E.; Garton, D.W.; Mushinsky, H.R. 1984 Bulletin of Environmental Contamination and Toxicology 32:460-468

Tissue	Cases Exposure Route	Range	Mean	General Information
5666 Body	a) 3 b) 4 c) 1	a) Not detected-0.08 ppm b) Not detected-0.36 ppm c) Not detected-0.14 ppm Wet wt	a) 0.03 ppm b) 0.05 ppm c) 0.03 ppm Wet wt	a) Lake Providence, 3.7% lipids b) Lake Bruin, 3.7% lipids c) Lake St. John, 6/6% lipids Collected 6/15-9/25/80. Tertiary consumers, major foods are fish and frogs. Lakes acting as sumps. Louisiana GC

BODY; ENVIRONMENTAL EXPOSURE; LOUISIANA; CHLORINE ORGANIC COMPOUNDS; INSECTICIDES; BIOMAGNIFICATION; FISHES; AGRICULTURE; PESTICIDE RESIDUES; AQUATIC; TERRESTRIAL; BIRDS; SNAKES; FROGS; CRAYFISH
Niethammer, K.R.; White, D.H.; Baskett, T.S.; Sayre, M.W. 1984 Archives of Contamination and Toxicology 13:63-74

Tissue	Cases Exposure Route	Range	Mean	General Information
5667 Liver	28	0.01-0.13 ppm	Not given	Thomas Point, Brusly and Belle sites, collected between 1977 & 79. Residue detected in 21 of 28. Range of means. Louisiana, Mississippi River, near Baton Rouge GC-EC
5668 Muscle	28	Not given	<0.01 ppm	Thomas Point, Brusly, Belle Helene sites, collected between 1977 & 79. Residues detected in 10 of 28. Louisiana, Mississippi River, near Baton Rouge GC-EC

ADIPOSE TISSUE; LIVER; MUSCLES; BODY; SNAKES; AQUATIC; ENVIRONMENTAL EXPOSURE; LOUISIANA; CHLORINE ORGANIC COMPOUNDS; LINDANE; ALDRIN; DIELDRIN; HEPTACHLOR EPOXIDE; HEXACHLOROBENZENE; DDT; DDE; DDE; POLYCHLORINATED BIPHENYLS; FISHES; AGRICULTURE; BIOMAGNIFICATION; BIO-CONCENTRATION; PESTICIDE RESIDUES; WATER POLLUTION
Sabourin, T.D.; Stickle, W.B.; Michot, C.E.; Garton, D.W.; Mushinsky, H.R. 1984 Bulletin of Environmental Contamination and Toxicology 32:460-468

1,4:5,8-Dimethanonaphthalene, 1,2,3,4,10,10-hexachloro-6,7-epoxy-1,4,4a,5,6,7,8,8a-octahydro-, endo,exo- (8 CI) 2,7:3,6-Dimethanonaphth(2,3-b)oxirene, 3,4,5,6,9,9-hexachloro-1a,2,2a,3,6,6a,7,7a-octahydro-, (1aalpha,2beta,2aalpha,3beta,6beta,6aalpha,7beta,7aalpha)- (9 CI)

60-57-1
C12-H8-Cl6-O
MW 380.93, MP 176-177 C, VP 7.78X10(E-7) mm Hg at 20 C

Sucker, longnose
CATOSTOMUS CATOSTOMUS

Tissue	Cases Exposure Route	Range	Mean	General Information
5669 Adipose	54 Ingestion	Not detected-0.029 mg/kg Wet wt	0.007 mg/kg Wet wt	North Saskatchewan River below Edmonton. Intestinal fat. Canada, Alberta GC-EC

FISHES; CANADA; PESTICIDE RESIDUES; CHLORINE ORGANIC COMPOUNDS; POLYCHLORINATED BIPHENYLS; BIOLOGICAL MONITORING; AQUATIC; BIOCONCENTRATION; ENVIRONMENTAL EXPOSURE; WATER POLLUTION; POLYCHLORINATED BIPHENYLS; DDE; DDD; DIELDRIN; HEXACHLOROBENZENE; HEXACHLOROCYCLOHEXANE
Chovelon, A.; George, L.; Gulayets, C.; Hoyano, Y.; McGuinness, E.; Moore, J.; Ramamoorthy, S.; Ramamoorthy, S.; Singer, P.; Smiley, K.; Wheatly A. 1984 Chemosphere 13(1)19-32

Sucker, white
CATOSTOMUS COMMERSONI

Tissue	Cases Exposure Route	Range	Mean	General Information
5670 Adipose	a) 40 b) 20 Ingestion	a) Not detected-0.058 mg/kg b) Not detected-0.010 mg/kg Wet wt	a) 0.006 mg/kg b) 0.002 mg/kg Wet wt	a) North Saskatchewan River below Edmonton b) Battle River. Intestinal fat. Canada, Alberta GC-EC

FISHES; CANADA; PESTICIDE RESIDUES; CHLORINE ORGANIC COMPOUNDS; POLYCHLORINATED BIPHENYLS; BIOLOGICAL MONITORING; AQUATIC; BIOCONCENTRATION; ENVIRONMENTAL EXPOSURE; WATER POLLUTION; POLYCHLORINATED BIPHENYLS; DDE; DDD; DIELDRIN; HEXACHLOROBENZENE; HEXACHLOROCYCLOHEXANE
Chovelon, A.; George, L.; Gulayets, C.; Hoyano, Y.; McGuinness, E.; Moore, J.; Ramamoorthy, S.; Ramamoorthy, S.; Singer, P.; Smiley, K.; Wheatly A. 1984 Chemosphere 13(1)19-32

Walleye
STIZOSTEDION VITREUM VITREUM

Tissue	Cases Exposure Route	Range	Mean	General Information
5671 Adipose	a) 65 b) 17 c) 23 Ingestion	a) Not detected-0.055 mg/kg b) 0.032-0.052 mg/kg c) 0.027-0.056 mg/kg Wet wt	a) 0.026 mg/kg b) 0.040 mg/kg c) 0.048 mg/kg Wet wt	a) North Saskatchewan River below Edmonton b) Bow River below Calgary c) St Mary's River Intestinal fat. Canada, Alberta GC-EC

FISHES; CANADA; PESTICIDE RESIDUES; CHLORINE ORGANIC COMPOUNDS; POLYCHLORINATED BIPHENYLS; BIOLOGICAL MONITORING; AQUATIC; BIOCONCENTRATION; ENVIRONMENTAL EXPOSURE; WATER POLLUTION; POLYCHLORINATED BIPHENYLS; DDE; DDD; DIELDRIN; HEXACHLOROBENZENE; HEXACHLOROCYCLOHEXANE
Chovelon, A.; George, L.; Gulayets, C.; Hoyano, Y.; McGuinness, E.; Moore, J.; Ramamoorthy, S.; Ramamoorthy, S.; Singer, P.; Smiley, K.; Wheatly A. 1984 Chemosphere 13(1)19-32

1,4:5,8-Dimethanonaphthalene, 1,2,3,4,10,10-hexachloro-6,7-epoxy-1,4,4a,5,6,7,8,8a-octahydro-, endo,exo- (8 CI) 2,7:3,6-Dimethanonaphth(2,3-b)oxirene, 3,4,5,6,9,9-hexachloro-1a,2,2a,3,6,6a,7,7a-octahydro-, (1aalpha,2beta,2aalpha,3beta,6beta,6aalpha,7beta,7aalpha)- (9 CI)
60-57-1
C12-H8-Cl6-O
MW 380.93, MP 176-177 C, VP 7.78X10(E-7) mm Hg at 20 C

Whitefish, lake
COREGONUS CLUPEAFORMIS

Tissue	Cases Exposure Route	Range	Mean	General Information
5672 Adipose	a) 21 b) 19 c) 14 d) 28 Ingestion	a) Not detected-0.006 mg/kg b) Not detected-0.050 c) Not detected-0.025 mg/kg d) Not detected-0.012 mg/kg Wet wt	a) 0.001 mg/kg b) 0.001 mg/kg c) 0.007 mg/kg d) 0.005 mg/kg Wet wt	a) Red Deer River below city of Red Deer b) Lake Newell c) McGregor Lake d) Bow River below Calgary Intestinal fat. Canada, Alberta GC-EC

FISHES; CANADA; PESTICIDE RESIDUES; CHLORINE ORGANIC COMPOUNDS; POLYCHLORINATED BIPHENYLS; BIOLOGICAL MONITORING; AQUATIC; BIOCONCENTRATION; ENVIRONMENTAL EXPOSURE; WATER POLLUTION; POLYCHLORINATED BIPHENYLS; DDE; DDD; DIELDRIN; HEXACHLOROBENZENE; HEXACHLOROCYCLOHEXANE
Chovelon, A.; George, L.; Gulayets, C.; Hoyano, Y.; McGuinness, E.; Moore, J.; Ramamoorthy, S.; Ramamoorthy, S.; Singer, P.; Smiley, K.; Wheatly A. 1984 Chemosphere 13(1)19-32

Whitefish, mountain
PROSOPIUM WILLIAMSONI

Tissue	Cases Exposure Route	Range	Mean	General Information
5673 Adipose	60 Ingestion	Not detected-0.058 mg/kg Wet wt	0.019 mg/kg Wet wt	Bow River below Calgary Intestinal fat. Canada, Alberta GC-EC

FISHES; CANADA; PESTICIDE RESIDUES; CHLORINE ORGANIC COMPOUNDS; POLYCHLORINATED BIPHENYLS; BIOLOGICAL MONITORING; AQUATIC; BIOCONCENTRATION; ENVIRONMENTAL EXPOSURE; WATER POLLUTION; POLYCHLORINATED BIPHENYLS; DDE; DDD; DIELDRIN; HEXACHLOROBENZENE; HEXACHLOROCYCLOHEXANE
Chovelon, A.; George, L.; Gulayets, C.; Hoyano, Y.; McGuinness, E.; Moore, J.; Ramamoorthy, S.; Ramamoorthy, S.; Singer, P.; Smiley, K.; Wheatly A. 1984 Chemosphere 13(1)19-32

Woodcock
PHILOHELA MINOR

Tissue	Cases Exposure Route	Range	Mean	General Information
5674 Adipose	6	<0.0001-21.1 ppm	3.7174 ppm	High level possibly due to contaminated sample. Alternative mean of 0.2187 ppm still higher than in mourning doves. None contained aldrin. Illinois, Vermilion and Shelby Counties GC-EC
5675 Brain	12	<0.0001-0.234 ppm	3.0206 ppm	None in 3 birds (same species). Levels higher than in robins, lower than in mourning doves. None contained aldrin. Illinois, Vermilion and Shelby Counties GC-EC

(next page)

1,4:5,8-Dimethanonaphthalene, 1,2,3,4,10,10-hexachloro-6,7-epoxy-1,4,4a,5,6,7,8,8a-octahydro-, endo,exo- (8 CI) 2,7:3,6-Dimethanonaphth(2,3-b)oxirene, 3,4,5,6,9,9-hexachloro-1a,2,2a,3,6,6a,7,7a-octahydro-, (1aalpha,2beta,2aalpha,3beta,6beta,6aalpha,7beta,7aalpha)- (9 CI)
60-57-1
C12-H8-Cl6-O
MW 380.93, MP 176-177 C, VP 7.78X10(E-7) mm Hg at 20 C

Woodcock
PHILOHELA MINOR

(continued)

Tissue	Cases Exposure Route	Range	Mean	General Information
5676 Heart	14	<0.0001-0.455 ppm	0.0567 ppm	None in 1 bird (same species). Level higher than in mourning doves or robins. None contained aldrin. Illinois, Vermilion and Shelby Counties GC-EC
5677 Liver	8	<0.0001-0.209 ppm	0.0450 ppm	None in 3 birds (same species). Levels higher than in mourning doves or robins. None contained aldrin. Illinois, Vermilion and Shelby Counties GC-EC
5678 Muscle	13	<0.0001-0.297 ppm	0.0343 ppm	None in 2 birds (same species). Levels higher than in mourning doves or robins. None contained aldrin. Illinois, Vermilion and Shelby Counties GC-EC

ADIPOSE TISSUE; BRAIN; MUSCLES; LIVER; HEART; TERRESTRIAL; BIRDS; ENVIRONMENTAL EXPOSURE; ILLINOIS; CHLORINATED HYDROCARBONS; CHLORINE ORGANIC COMPOUNDS; DDE; DIELDRIN; HEPTACHLOR EPOXIDE; INSECTICIDES; PESTICIDES; POLYCHLORINATED BIPHENYLS; BIOACCUMULATION; FOOD CONTAMINATION; PESTICIDE RESIDUES
Edwards, W.R.; Dusan, R.E.; Siemers, R.J. 1983 Bulletin of Environmental Contamination and Toxicology 31:407-414

2-Naphthacenecarboxamide, 4-(dimethylamino)-1,4,4a,5,5a,6,11,12a-octahydro-3,5,6,10,12,12a-hexahydroxy-6-methyl-1,11-dioxo-, (4S-(4alpha,4aalpha,5alpha,5aalpha,6beta,12aalpha))-
79-57-2
C22-H24-N2-O9
MW 460.44, MP 184.5-185.5 C, BP 1.634 C at 20 mm Hg

Buffalo
BUBALUS BUBALIS

Tissue	Cases Exposure Route	Range	Mean	General Information
5679 Blood, serum	1 Injection	a) Not given b) Not given c) Not given	a) 350 ug/ml b) 50 ug/ml c) 10 ug/ml	a) 0 hr b) 1 hr c) 12 hr Times after 22 mg/kg IV. Healthy mixed-breed calf. Values estimated from graph. Bioassay

BUFFALO; JUVENILES; INDIA; BLOOD SERUM; ANTIBIOTICS; DRUGS; TERRESTRIAL; DELIBERATE EXPOSURE
Varma, K.J.; Paul, B.S. 1983 American Journal of Veterinary Research 44(3):497-499

2-Naphthacenecarboxamide, 4-(dimethylamino)-1,4,4a,5,5a,6,11,12a-o ctahydro-3,5,6,10,12,12a-hexahydroxy-6-m ethyl-1,11-dioxo-, (4S-(4alpha,4aalpha,5alpha,5aalpha,6beta,12aalpha))-
79-57-2
C22-H24-N2-O9
MW 460.44, MP 184.5-185.5 C, BP 1.634 C at 20 mm Hg
Cattle
BOS sp.

Tissue	Cases Exposure Route	Range	Mean	General Information
5680 Blood, plasma	13 Injection	a) 4.13+/-5.73 ug/ml b) 4.67-5.60 ug/ml c) Not given d) Not given	a) 4.95+/-0.47 ug/ml b) 5.23+/-0.38 ug/ml c) 5.05+/-0.44 ug/ml d) 4.86+/-0.68 ug/ml	a) Healthy postpartum cows after 8 h infusion b) Injected postpartum cows after 8 h infusion c) Cows in a) & b) d) Cycling cows after 8 h infusion Infusion dose to approach steady-state plasma concentration 5 ug/ml. Fecal inoculum to b) within 24 hr of calving. Post calving wt 335-494 kg. Postpartum days 3-12. HPLC
CATTLE; OVARIES; UTERUS; ANTIBIOTICS; COMPARATIVE EVALUATIONS; ILLINOIS; BLOOD PLASMA				
Bretslaff, K.N.; Ott, R.S.; Koritz, G.D.; Bevill, R.F.; Gustaffsson, B.K., Davis, L.E. 1983 American Journal of Veterinary Research 44(5):760-763				

Tissue	Cases Exposure Route	Range	Mean	General Information
5681 Blood, plasma	6 Injection	a) 1.39-1.59 ug/ml b) 0.65-1.04 ug/ml c) 0.63-1.31 ug/ml d) 0.24-0.45 ug/ml	a) 1.50+/-0.10 ug/ml b) 0.73+/-0.28 ug/ml c) 0.99+/-0.34 ug/ml d) 0.35+/-0.10 ug/ml	a) Healthy cows 4 hr after 22 mg/kg b) Healthy cows 24 hr after 22 mg/kg c) Infected cows 4 hr after 22 mg/kg d) Infected cows 24 hr after 22 mg/kg 4 day postpartum, wt 323-474 kg. HPLC
OVARIES; UTERUS; TERRESTRIAL; DRUGS; BLOOD PLASMA; DELIBERATE EXPOSURE; ANTIBIOTICS; CATTLE; CARUNCLE				
Bretslaff, K.N.; Ott, R.S.; Koritz, G.D.; Bevill, R.F.; Gustafsson, B.K.; Davis, L.E. 1983 American Journal of Veterinary Research 44(5):764-769				

Tissue	Cases Exposure Route	Range	Mean	General Information
5682 Blood, serum	38 Injection	a) 120-0.3 ug/ml b) 0.1-0.5 ug/ml c) 4.5-0.7 ug/ml d) 2.8-3.7 ug/ml e) 30-4 ug/ml	a) Not given b) Not given c) Not given d) Not given e) Not given	a) 0 and 72 hr after 20 mg/kg IV, long-acting formulation. 212-275 kg young beef cattle, 6 cases b) 0 and 96 hr after 20 mg/kg IM, peak 4 ug/ml at 60-90 min which lasted for 12 hr, same 6 cases c) 2 and 72 hr after 20 mg/kg IM, 8-80 (mean 38.5) d old French Freisian male calves, 40-90 (mean 71) kg, 24 cases d) Peaks, 10 mg/kg IM followed by 5 mg/kg, 2x/d. Trough, 1 ug/ml. Conventional formulation, calves, 8 cases e) Peaks, 10 mg/kg IV, 24 hr later 10 mg/kg IM. Trough 0.5 ug/ml. Same 8 Estimated from graph. Microbiological
BLOOD SERUM; KIDNEYS; LIVER; SPLEEN; MUSCLES; LUNGS; CATTLE; TERRESTRIAL; DELIBERATE EXPOSURE; JUVENILES; ANTIBIOTICS; COMPARATIVE EVALUATIONS; DRUGS				
Toutain, P.L.; Raynaud, J.P. 1983 American Journal of Veterinary Research 44(7):1203-1209				

2-Naphthacenecarboxamide, 4-(dimethylamino)-1,4,4a,5,5a,6,11,12a-o ctahydro-3,5,6,10,12,12a-hexahydroxy-6-m ethyl-1,11-dioxo-, (4S-(4alpha,4aalpha,5alpha,5aalpha,6b eta,12aalpha))-
79-57-2
C22-H24-N2-O9
MW 460.44, MP 184.5-185.5 C, BP 1.634 C at 20 mm Hg

Cattle
BOS sp.

Tissue	Cases Exposure Route	Range	Mean	General Information
5683 Blood, serum	10 Injection	a) Not given b) Not given	a) 0.51+/-0.10 ug/ml b) 0.5+/-0.13 ug/ml	a) Controls b) Diseased animals 24 hr after 11 mg/kg. 1-2 mo old Holstein calves. Microbiological

CATTLE; JUVENILES; KIDNEYS; LIVER; LUNGS; ANTIBIOTICS; BLOOD SERUM; DRUGS; TERRESTRIAL; DELIBERATE EXPOSURE
Ames, T.R.; Larson, V.L.; Stowe, C.M. 1983 American Journal of Veterinary Research 44(7):1354-1357

Tissue	Cases Exposure Route	Range	Mean	General Information
5684 Caruncles	6 Injection	a) 57.32-74.82 ug/g b) 28.03-67.82 ug/g	a) 67.07+/-8.92 ug/g b) 42.34+/-22.12 ug/g	a) Healthy cows, 4 day postpartum b) Infected cows, 4 day postpartum At 24 hr after 5.5 mg/kg Wt 323-474 kg. HPLC

OVARIES; UTERUS; TERRESTRIAL; DRUGS; BLOOD PLASMA; DELIBERATE EXPOSURE; ANTIBIOTICS; CATTLE; CARUNCLE
Bretzlaff, K.N.; Ott, R.S.; Koritz, G.D.; Bevill, R.F.; Gustafsson, B.K.; Davis, L.E. 1983 American Journal of Veterinary Research 44(5):764-769

Tissue	Cases Exposure Route	Range	Mean	General Information
5685 Kidney	24 Injection	20-5 ug/ml	Not given	2 and 72 hr after 20 mg/kg IM, long-acting formulation, peak 22 ug/ml at 8 hr. 8-80 (mean 38.5) d old French Freisian males, 40-99 (mean 71) kg. Estimated from graph. Microbiological

BLOOD SERUM; KIDNEYS; LIVER; SPLEEN; MUSCLES; LUNGS; CATTLE; TERRESTRIAL; DELIBERATE EXPOSURE; JUVENILES; ANTIBIOTICS; COMPARATIVE EVALUATIONS; DRUGS
Toutain, P.L.; Raynaud, J.P. 1983 American Journal of Veterinary Research 44(7):1203-1209

Tissue	Cases Exposure Route	Range	Mean	General Information
5686 Kidney	10 Injection	a) Not given b) Not given	a) 5.07+/-0.84 ug/g b) 4.22+/-1.43 ug/g	a) Controls b) Diseased animals 24 hr after 11 mg/kg. 1-2 mo old Holstein calves. Microbiological

CATTLE; JUVENILES; KIDNEYS; LIVER; LUNGS; ANTIBIOTICS; BLOOD SERUM; DRUGS; TERRESTRIAL; DELIBERATE EXPOSURE
Ames, T.R.; Larson, V.L.; Stowe, C.M. 1983 American Journal of Veterinary Research 44(7):1354-1357

2-Naphthacenecarboxamide, 4-(dimethylamino)-1,4,4a,5,5a,6,11,12a-o ctahydro-3,5,6,10,12,12a-hexahydroxy-6-m ethyl-1,11-dioxo-, (4S-(4alpha,4aalpha,5alpha,5aalpha,6beta,12aalpha))-
79-57-2
C22-H24-N2-O9
MW 460.44, MP 184.5-185.5 C, BP 1.634 C at 20 mm Hg

Cattle
BOS sp.

Tissue	Cases Exposure Route	Range	Mean	General Information
5687 Liver	24 Injection	12-4.5 ug/ml	Not given	2 and 72 hr after 20 mg/kg IM, long-acting formulation. 8-80 (mean 38.5) d old French Freisian males, 40-99 (mean 71) kg. Estimated from graph. Microbiological
BLOOD SERUM; KIDNEYS; LIVER; SPLEEN; MUSCLES; LUNGS; CATTLE; TERRESTRIAL; DELIBERATE EXPOSURE; JUVENILES; ANTIBIOTICS; COMPARATIVE EVALUATIONS; DRUGS				
Toutain, P.L.; Raynaud, J.P. 1983 American Journal of Veterinary Research 44(7):1203-1209				

Tissue	Cases Exposure Route	Range	Mean	General Information
5688 Liver	10 Injection	a) Not given b) Not given	a) 1.50+/-0.50 ug/g b) 1.27+/-0.35 ug/g	a) Controls b) Diseased animals 24 hr after 11 mg/kg. 1-2 mo old Holstein calves. Microbiological
CATTLE; JUVENILES; KIDNEYS; LIVER; LUNGS; ANTIBIOTICS; BLOOD SERUM; DRUGS; TERRESTRIAL; DELIBERATE EXPOSURE				
Ames, T.R.; Larson, V.L.; Stowe, C.M. 1983 American Journal of Veterinary Research 44(7):1354-1357				

Tissue	Cases Exposure Route	Range	Mean	General Information
5689 Lung	24 Injection	6.5-0.5 ug/ml	Not given	2 and 72 hr after 20 mg/kg IM, long-acting formulation. 8-80 (mean 38.5) d old French Freisian males, 40-99 (mean 71) kg. Estimated from graph. Microbiological
BLOOD SERUM; KIDNEYS; LIVER; SPLEEN; MUSCLES; LUNGS; CATTLE; TERRESTRIAL; DELIBERATE EXPOSURE; JUVENILES; ANTIBIOTICS; COMPARATIVE EVALUATIONS; DRUGS				
Toutain, P.L.; Raynaud, J.P. 1983 American Journal of Veterinary Research 44(7):1203-1209				

Tissue	Cases Exposure Route	Range	Mean	General Information
5690 Lung	10 Injection	a) Not given b) Not given c) Not given	a) 1.09+/-0.09 ug/g b) 1.24+/-0.11 ug/g c) 1.48+/-0.20 ug/g	a) Controls, healthy-appearing tissue b) Diseased animals, healthy-appearing tissue c) Diseased animals, diseased tissue 24 hr after 11 mg/kg. 1-2 mo old Holstein calves. Microbiological
CATTLE; JUVENILES; KIDNEYS; LIVER; LUNGS; ANTIBIOTICS; BLOOD SERUM; DRUGS; TERRESTRIAL; DELIBERATE EXPOSURE				
Ames, T.R.; Larson, V.L.; Stowe, C.M. 1983 American Journal of Veterinary Research 44(7):1354-1357				

2-Naphthacenecarboxamide, 4-(dimethylamino)-1,4,4a,5,5a,6,11,12a-octahydro-3,5,6,10,12,12a-hexahydroxy-6-methyl-1,11-dioxo-, (4S-(4alpha,4aalpha,5alpha,5aalpha,6beta,12aalpha))-
79-57-2
C22-H24-N2-O9
MW 460.44, MP 184.5-185.5 C, BP 1.634 C at 20 mm Hg
Cattle
BOS sp.

Tissue	Cases Exposure Route	Range	Mean	General Information
5691 Muscle	24 Injection	3-0.7 ug/ml	Not given	2 and 72 hr after 20 mg/kg IM, long-acting formulation. 8-80 (mean 38.5) d old French Freisian males, 40-90 (mean 71) kg. Estimated from graph. Microbiological

BLOOD SERUM; KIDNEYS; LIVER; SPLEEN; MUSCLES; LUNGS; CATTLE; TERRESTRIAL; DELIBERATE EXPOSURE; JUVENILES; ANTIBIOTICS; COMPARATIVE EVALUATIONS; DRUGS
Toutain, P.L.; Raynaud, J.P. 1983 American Journal of Veterinary Research 44(7):1203-1209

Tissue	Cases Exposure Route	Range	Mean	General Information
5692 Ovary	13 Injection	a) 4.27-4.86 ug/g b) 3.62-5.26 ug/g c) Not given d) Not given	a) 4.57+/-0.36 ug/g b) 4.53+/-0.27 ug/g c) 4.55+/-0.45 ug/g d) 4.98+/-0.57 ug/g	a) Healthy postpartum cows after 8 h infusion b) Injected postpartum cows after 8 h infusion c) Cows in a) & b) d) Cycling cows after 8 h infusion Infusion dose to approach steady-state plasma concentration 5 ug/ml. Fecal inoculum to b) within 24 hr of calving. Post calving wt 335-494 kg. Postpartum days 3-12. HPLC

CATTLE; OVARIES; UTERUS; ANTIBIOTICS; COMPARATIVE EVALUATIONS; ILLINOIS; BLOOD PLASMA
Bretzlaff, K.N.; Ott, R.S.; Koritz, G.D.; Bevill, R.F.; Gustaffsson, B.K.; Davis, L.E. 1983 American Journal of Veterinary Research 44(5):760-763

Tissue	Cases Exposure Route	Range	Mean	General Information
5693 Ovary	6 Injection	a) 0.88-1.25 ug/g b) 0.29-0.53 ug/g	a) 1.04+/-0.19 ug/g b) 0.43+/-0.13 ug/g	a) Healthy cows, 4 day postpartum b) Infected cows, 4 day postpartum At 24 hr after 6.6 mg/kg Wt 323-474 kg. HPLC

OVARIES; UTERUS; TERRESTRIAL; DRUGS; BLOOD PLASMA; DELIBERATE EXPOSURE; ANTIBIOTICS; CATTLE; CARUNCLE
Bretzlaff, K.N.; Ott, R.S.; Koritz, G.D.; Bevill, R.F.; Gustafsson, B.K.; Davis, L.E. 1983 American Journal of Veterinary Research 44(5):764-769

2-Naphthacenecarboxamide, 4-(dimethylamino)-1,4,4a,5,5a,6,11,12a-o ctahydro-3,5,6,10,12,12a-hexahydroxy-6-m ethyl-1,11-dioxo-, (4S-(4alpha,4aalpha,5alpha,5aalpha,6b eta,12aalpha))-
79-57-2
C22-H24-N2-O9
MW 460.44, MP 184.5-185.5 C, BP 1.634 C at 20 mm Hg

Cattle
BOS sp.

Tissue	Cases Exposure Route	Range	Mean	General Information
5694 Spleen	24 Injection	6-0.65 ug/ml	Not given	2 and 72 hr after 20 mg/kg IM, long-acting formulation. 8-80 (mean 38.5) d old French Preisian males, 40-99 (mean 71) kg. Estimated from graph. Microbiological
BLOOD SERUM; KIDNEYS; LIVER; SPLEEN; MUSCLES; LUNGS; CATTLE; TERRESTRIAL; DELIBERATE EXPOSURE; JUVENILES; ANTIBIOTICS; COMPARATIVE EVALUATIONS; DRUGS Toutain, P.L.; Raynaud, J.P. 1983 American Journal of Veterinary Research 44(7):1203-1209				

Tissue	Cases Exposure Route	Range	Mean	General Information
5695 Uterus	13 Injection	a) 2.69-4.43 ug/g b) 3.66-6.17 ug/g c) Not given d) Not given	a) 3.65+/-0.55 ug/g b) 4.18+/-1.17 ug/g c) 3.85+/-0.84 ug/g d) 4.50+/-0.45 ug/g	a) Healthy postpartum cows after 8 h infusion b) Injected postpartum cows after 8 h infusion c) Cows in a) & b) d) Cycling cows after 8 h infusion Infusion dose to approach steady-state plasma concentration 5 ug/ml. Fecal inoculum to b) within 24 hr of calving. Post calving wt 335-404 kg. Postpartum days 3-12. HPLC
CATTLE; OVARIES; UTERUS; ANTIBIOTICS; COMPARATIVE EVALUATIONS; ILLINOIS; BLOOD PLASMA Bretzlaff, K.N.; Ott, R.S.; Koritz, G.D.; Bevill, R.F.; Gustaffsson, B.K.; Davis, L.E. 1983 American Journal of Veterinary Research 44(5):760-763				

Tissue	Cases Exposure Route	Range	Mean	General Information
5696 Uterus	6 Injection	a) 14.07-30.95 ug/g b) 1.09-2.44 ug/g c) 0.71-18.37 ug/g d) 0.25-0.91 ug/g	a) 22.63+/-8.44 ug/g b) 1.48+/-0.84 ug/g c) 11.39+/-9.40 ug/g d) 0.57+/-0.33 ug/g	a) Intact tissue. Healthy cows 4 day postpartum b) Uterine wall. Healthy cows 4 day postpartum c) Intact tissue. Infected cows 4 day postpartum d) Uterine wall. Infected cows 4 day postpartum During 24 hr after 5.5 mg/kg Wt 323-474 kg. HPLC
OVARIES; UTERUS; TERRESTRIAL; DRUGS; BLOOD PLASMA; DELIBERATE EXPOSURE; ANTIBIOTICS; CATTLE; CARUNCLE Bretzlaff, K.N.; Ott, R.S.; Koritz, G.D.; Bevill, R.F.; Gustafsson, B.K.; Davis, L.E. 1983 American Journal of Veterinary Research 44(5):764-769				

2-Naphthacenecarboxamide, 4-(dimethylamino)-1,4,4a,5,5a,6,11,12a-o ctahydro-3,5,6,10,12,12a-hexahydroxy-6-m ethyl-1,11-dioxo-, (4S-(4alpha,4aalpha,5alpha,5aalpha,6beta,12aalpha))-
79-57-2
C22-H24-N2-O9
MW 460.44, MP 184.5-185.5 C, BP 1.634 C at 20 mm Hg

Swine
SUS sp.

Tissue	Cases Exposure Route	Range	Mean	General Information
5697 Adrenal gland	31 Ingestion	a) 4.6-8.8 ug/g b) 2.6-6.0 ug/g c) 3.0-5.2 ug/g d) 3.0-10.2 ug/g e) 1.0-1.6 ug/g f) 0.0-0.5 ug/g	a) 6.6 ug/g b) 4.2 ug/g c) 5.4 ug/g [sic] d) 5.8 ug/g e) 1.2 ug/g f) 0.5 ug/g	a) 1.0 hr after treatment with 50 mg/kg b) 2 hr c) 3.0 hr d) 5.0 hr e) 8.0 hr f) 24.0 hr Sampled and not detected at 0.5 and 48.0 hr. Yorkshire Landrace cross-bred. Canada, Ontario Bioassay
5698 Bile	31 Ingestion	a) 2.6-3.0 ug/mL b) 1.7-15.0 ug/mL c) 10.1-20.9 ug/mL d) 7.3-7.8 ug/mL e) 7.9-29.0 ug/mL f) 6.3-25.5 ug/mL g) 0.3-0.7 ug/mL h) 0.3-0.7 ug/mL	a) 2.8 ug/mL b) 7.1 ug/mL c) 16.9 ug/mL d) 7.5 ug/mL e) 18.9 ug/mL f) 17.9 ug/ml g) 0.5 ug/mL h) 0.4 ug/mL	a) 0.5 hr after 50 mg/kg b) 1.0 hr c) 2.0 hr d) 3.0 hr e) 5.0 hr f) 8.0 hr g) 24 hr h) 48.0 hr Yorkshire Landrace cross-bred. Canada, Ontario Bioassay
5699 Blood, serum	31 Ingestion	4.2-8.7 ug/g	6.3 ug/g	Highest mean, 3 hr after 50 mg/kg. Trace amount at 24 hr. Yorkshire Landrace cross-bred Canada, Ontario Bioassay
5700 Heart	31 Ingestion	a) 6.6-9.2 ug/g b) 5.2-8.8 ug/g c) 7.0-11.0 ug/g d) 7.8-9.8 ug/g e) 3.2-4.6 ug/g f) 0.0-0.8 ug/g	a) 8.0 ug/g b) 6.6 ug/g c) 8.6 ug/g d) 8.6 ug/g e) 4.0 ug/g f) 0.6 ug/g	a) 1.0 hr after treatment with 50 mg/kg b) 2 hr c) 3.0 hr d) 5.0 hr e) 8.0 hr f) 24.0 hr Sampled and not detected at 0.5 and 48.0 hr. Yorkshire Landrace cross-bred. Canada, Ontario Bioassay
5701 Kidney	31 Ingestion	a) 41.6-58.9 ug/g b) 2.0-3.0 ug/g	a) 49.1 ug/g b) 2.6 ug/g	a) Cortex, peak, 3 hr after 50 mg/kg b) Lowest levels, 48 hr Yorkshire Landrace cross-bred. Canada, Ontario Bioassay

(next page)

2-Naphthacenecarboxamide, 4-(dimethylamino)-1,4,4a,5,5a,6,11,12a-o ctahydro-3,5,6,10,12,12a-hexahydroxy-6-m ethyl-1,11-dioxo-, (4S-(4alpha,4aalpha,5alpha,5aalpha,6b eta,12aalpha))-
79-57-2
C22-H24-N2-O9
MW 460.44, MP 184.5-185.5 C, BP 1.634 C at 20 mm Hg

Swine
SUS sp.

(continued)

Tissue	Cases Exposure Route	Range	Mean	General Information
5702 Liver	31 Ingestion	12.4-14.0 ug/g [sic]	27.2 ug/g	Highest mean, 3 hr after 50 mg/kg. Trace amount at 24 hr. Yorkshire Landrace cross-bred Canada, Ontario Bioassay
5703 Lung	31 Ingestion	7.0-0.5 ug/g	Not given	4 and 48 hr after 50 mg/kg. Range of means (3 animals/point) estimated from graph. Yorkshire Landrace cross-bred. Canada, Ontario Bioassay
5704 Lymph node	31 Ingestion	a) 9.6-13.0 ug/g b) 5.4-9.6 ug/g c) 5.8-11.2 ug/g d) 6.6-9.6 ug/g e) 1.6-3.8 ug/g f) 0.0-0.6 ug/g	a) 11.0 ug/g b) 7.0 ug/g c) 7.0 ug/g d) 8.2 ug/g e) 2.6 ug/g f) 0.6 ug/g	a) 1.0 hr after treatment with 50 mg/kg b) 2 hr c) 3.0 hr d) 5.0 hr e) 8.0 hr f) 24.0 hr Sampled and not detected at 0.5 and 48.0 hr. Yorkshire Landrace cross-bred. Canada, Ontario Bioassay
5705 Muscle	31 Ingestion	5.4-9.2 ug/g	7.5 ug/g	Highest mean, 3 hr after 50 mg/kg. Trace amount at 24 hr. Yorkshire Landrace cross-bred Canada, Ontario Bioassay
5706 Spleen	31 Ingestion	a) 3.6-5.6 ug/g b) 6.0-6.8 ug/g c) 4.2-5.6 ug/g d) 4.8-6.8 ug/g e) 4.2-8.8 ug/g f) 1.4-2.2 ug/g g) 0.0-0.5 ug/g	a) 4.4 ug/g b) 6.2 ug/g c) 2.3 ug/g [sic] d) 6.2 ug/g e) 6.4 ug/g f) 2.0 ug/g g) 0.5 ug/g	a) 0.5 hr after 50 mg/kg b) 1.0 hr c) 2.0 hr d) 3 hr e) 5.0 hr f) 8 hr g) 24.0 hr Yorkshire Landrace cross-bred. Canada, Ontario Bioassay

(next page)

2-NaphthacenecarLoxamide, 4-(dimethylamino)-1,4,4a,5,5a,6,11,12a-o ctahydro-3,5,6,10,12,12a-hexahydroxy-6-m ethyl-1,11-dioxo-, (4S-(4alpha,4aalpha,5alpha,5aalpha,6b eta,12aalpha))-
79-57-2
C22-H24-N2-O9
MW 460.44, MP 184.5-185.5 C, BP 1.634 C at 20 mm Hg

Swine
SUS sp.

(continued)

Tissue	Cases Exposure Route	Range	Mean	General Information
5707 Thyroid Gland	31 Ingestion	a) 2.4-4.2 ug/g b) 2.4-6.4 ug/g c) 2.8-4.1 ug/g d) 2.4-5.0 ug/g e) 0.8-1.4 ug/g	a) 3.4 ug/g b) 4.4 ug/g c) 3.8 ug/g d) 3.6 ug/g e) 1.2 ug/g	a) 1.0 hr after 50 mg/kg b) 2.0 hr c) 3.0 hr d) 5.0 hr e) 8.0 hr Sampled but not detected at 0.5, 24.0 and 48.0 hr. Yorkshire Landrace cross-bred. Canada, Ontario Bioassay
5708 Urine	31 Ingestion	a) 4.0-124.0 ug/mL b) 115.6-322.3 ug/mL c) 77.9-185.5 ug/mL d) 32.7-441.0 ug/mL e) 44.9-158.5 ug/mL f) 6.8-18.8 ug/mL g) 8.6-16 ug/mL h) 1.2-2.1 ug/mL [sic]	a) 68.4 ug/mL b) 230.7 ug/mL c) 149.7 ug/mL d) 225.1 ug/mL e) 91.8 ug/mL f) 11.4 ug/mL g) 12.3 ug/mL h) 3.7 ug/mL	a) 0.5 hr after 50 mg/kg b) 1.0 hr c) 2 hr d) 3.0 hr e) 5 hr f) 8.0 hr g) 24 hr h) 48 hr 3 animals/time point. Yorkshire Landrace cross-bred. Canada, Ontario Bioassay

KIDNEYS; LIVER; BLOOD SERUM; MUSCLES; URINE; BILE; SPLEEN; LUNGS; THYROID GLANDS; LYMPH NODES; ADRENAL GLANDS; HEART; SWINE; TERRESTRIAL; DELIBERATE EXPOSURE; CONSUMER EXPOSURE; CANADA; ANTIBIOTICS; ANIMAL FEEDS; AGRICULTURE; BIOLOGICAL MONITORING; FOOD CONTAMINATION; MEAT; POPULATION EXPOSURE

Black, W.D.; Gentry, R.D. 1984 Canadian Veterinary Journal 25:158-161

2-Oxazolidinone, 3-((5-nitrofurfurylidene)amino)- (8 CI); 2-Oxazolidinone, 3-(((5-nitro-2-furanyl)methylene)amino)- (9 CI)
67-45-8
C8-H7-N3-O5
MW 225.16, MP 275 C (decomp)

Chicken
GALLUS GALLUS

Tissue	Cases Exposure Route	Range	Mean	General Information
5709 Feathers	Ingestion	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given g) Not given h) Not given	a) 341 ppb b) 767 ppb c) 408 ppb d) 985 ppb e) 1215 ppb f) 1473 ppb g) 6397 ppb h) 213 ppb	a) 21 d withdrawal, 200 g/ton b) 14 d withdrawal, 200 g/ton c) 7 d withdrawal, 200 g/ton d) 5 d withdrawal, 200 g/ton e) 3 d withdrawal, 200 g/ton f) 0 d withdrawal, 200 g/ton g) 0 d withdrawal, 400 g/ton h) Control Days withdrawal is number of d off treatment before processing. Authors indicate 7 d and 14 d samples possibly interchanged and controls cross contaminated prior to processing feathers. Diet with 400 g/ton depressed growth HPLC
5710 Skin	160 Ingestion	a) <0.5-14 ppb b) <0.5-0.6 ppb c) <0.5-0.8 ppb d) <0.5 ppb e) 0.7-3.5 ppb	a) Not given b) Not given c) Not given d) Not given e) Not given	a) 55 d treatment, 0 d withdrawal, 200 g/ton feed b) 52 d treatment, 3 d withdrawal, 200 g/ton feed c) 50 d treatment, 5 d withdrawal, 200 g/ton feed d) 48-0 d treatment, 7-55 d withdrawal, 200 g/ton feed e) 55 d treatment, 0 d withdrawal, 400 g/ton feed. Days withdrawal is number of d off treatment before processing. Data composited for skin/adipose. Levels below detection limit for d). One of 12 birds in b) and in c) had detectable levels. 7 of 12 in a) had <2 ppb. Residues found in all birds e). Diet with 400 g/ton depressed growth HPLC

CHICKENS; TERRESTRIAL; SKIN; FURAZOLIDONE; FOOD CONTAMINATION; GROWTH PROMOTERS; ANTIBIOTICS; DIETS; FEATHERS; DELIBERATE EXPOSURE; ANIMAL FEEDS; DRUGS; AGRICULTURE

Winterlin, W.; Mourer, C.; Hall, G.; Kratzer, F.; Weaver, G.L.H.; Tribble, L.F.; Kim, S.M. 1984 Journal of Environmental Science and Health B19(2):209-224

2-Oxazolidinone, 5-(morpholinomethyl)-3-((5-nitrofurfurylidene)amino)- (8 CI); 2-Oxazolidinone, 5-(4-morpholinylmethyl)-3-(((5-nitro-2-furanyl)methylene)amino)- (9 CI)
139-91-3
C13-H16-N4-O6
MW 324.29, MP 206 C (decomp)

Goat
CAPRA sp.

Tissue	Cases Exposure Route	Range	Mean	General Information
5711 Bile	1 Injection	a) Not applicable b) Not applicable	4.0X10(E-5) uCi/ml	Bound and unbound radioactivity 72 hr after 777 mg intramammary. Aqueous phase, organic phase, and residue pellet data given. Data expressed in mg equivalent of bile. Scintillation counting
5712 Blood, plasma	3 Injection	a) 14-0.5 ppm b) 3-2%	a) Not applicable b) Not applicable	a) 0.25-3 hr, peak (14 ppm) immediately after 10 mg/kg IV, 2 cases b) % doseX10(E+3), 0-75 hr, peak (0.014%) 2 hr after 777 mg [C-14]-labeled-drug intramammary, 1 case, 72 hr recovery was 0.093% Data estimated from graph. HPLC; Scintillation counting
5713 Fat	1 Injection	a) Not applicable b) Not applicable	1X10(E-4) uCi/g	Bound and unbound radioactivity 72 hr after 777 mg intramammary. Aqueous phase, organic phase, and residue pellet data given. Data expressed in mg equivalent of fat. Scintillation counting
5714 Intestine	1 Injection	a) Not applicable b) Not applicable	2X10(E-6) uCi/mg	Duodenum, bound and unbound radioactivity 72 hr after 777 mg intramammary. Aqueous phase, organic phase, and residue pellet data given. Data expressed in mg equivalent of protein. Scintillation counting
5715 Kidney	1 Injection	a) Not applicable b) Not applicable	a) 0.13% b) 8.0X10(E-6) uCi/mg	a) % recovery in 72 hr b) Bound and unbound radioactivity at 72 hr. Aqueous phase, organic phase, and residue pellet data given. Data expressed in mg equivalents of protein Dose was 777 mg intramammary. Scintillation counting
5716 Liver	1 Injection	a) Not applicable b) Not applicable	a) 0.51% b) 4.5X10(E-6) uCi/mg	a) % recovery in 72 hr b) Bound and unbound radioactivity at 72 hr. Aqueous phase, organic phase, and residue pellet data given. Data expressed in mg equivalents of protein Dose was 777 mg intramammary. Scintillation counting
5717 Milk	1 Injection	Not applicable	0.76%	% recovery in 72 hr after 777 mg intramammary. Scintillation counting
5718 Muscle	1 Injection	a) Not applicable b) Not applicable	1.0X10(E-6) uCi/mg	Bound and unbound radioactivity 72 hr after 777 mg intramammary. Aqueous phase, organic phase, and residue pellet data given. Data expressed in mg equivalent of protein. Scintillation counting
5719 Udder	1 Injection	a) Not applicable b) Not applicable	5.0X10(E-6) uCi/mg	Bound and unbound radioactivity 72 hr after 777 mg intramammary. Aqueous phase, organic phase, and residue pellet data given. Data expressed in mg equivalent of protein. Scintillation counting

(next page)

2-Oxazolidinone, 5-(morpholinomethyl)-3-((5-nitrofurfurylidene)amino)- (8 CI); 2-Oxazolidinone, 5-(4-morpholinylmethyl)-3-(((5-nitro-2-furanyl)methylene)amino)- (9 CI)
139-91-3
C13-H16-N4-O6
MW 324.29, MP 206 C (decomp)

Goat
CAPRA sp.

(continued)

Tissue	Cases Exposure Route	Range	Mean	General Information
5720 Urine	2 Injection	a) Not applicable b) 0.5-0.1%	a) 25.11% b) Not applicable	a) % recovery in 72 hr after 777 mg intramammary b) 2-72 hr, peak (12% and 9%) 10 and 20 hr after 777 mg/intramammary 56.01% of dose recovered in feces in 72 hr. TLC
BLOOD PLASMA; MILK; URINE; KIDNEYS; LIVER; DUODENUM; MUSCLES; ADIPOSE TISSUE; BILE; UDDER; DELIBERATE EXPOSURE; GOATS; ANTIBIOTICS; INFECTION; DRUGS; DRUG THERAPY; BIOACCUMULATION; RADIONUCLIDES; LACTATION; INTESTINES				
Ng, L.L.; Bevill, R.F.; Perkins, E.G. 1984 Journal of Pharmaceutical Sciences 73(3):293-297				

2-Picolinium, 1-((4-amino-2-propyl-5-pyrimidinyl)methyl)-, chloride (8 CI); Pyridinium, 1-((4-amino-2-propyl-5-pyrimidinyl)methyl)-2-methyl-, chloride (9 CI)
121-25-5
C14-H19-N4.Cl
MW 278.78
Pheasant
PHASIANUS sp.

Tissue	Cases Exposure Route	Range	Mean	General Information
5721 Liver	a) 12 b) 12 Ingestion	a) Not given b) Not given	a) 0.28+/-0.02 ppm b) 0.30+/-0.03 ppm S.E.	a) After 4 wk treatment at 0.017% b) 0.035% Drug in feed during first 4 wk of life. Exposure to coccidia at 2 wk. Mortality 3%, compared to 35% in unmedicated chicks. Pennsylvania
5722 Muscle	a) 12 b) 12 Ingestion	a) Not given b) Not given	a) 0.35+/-0.02 ppm b) 0.30+/-0.02 ppm S.E.	a) After 4 wk treatment at 0.017% b) 0.035% Drug in feed during first 4 wk of life. Exposure to coccidia at 2 wk. Mortality 3%, compared to 35% in unmedicated chicks. Pennsylvania
LIVER; MUSCLES; TERRESTRIAL; DELIBERATE EXPOSURE; INFECTION; ANTIBIOTICS; DRUG THERAPY; DRUGS; ANIMAL FEEDS				
Patton, W.H.; Schwartz, L.D.; Babish, J.G.; Lisk, D.J. 1984 Avian Diseases 28(3):693-699				

2-Propenamide

79-06-1
C3-H5-N-O
MW 71.08, MP 84.5 C, BP 125 C at 22 mm Hg, VP 1.6 mm Hg at 84.5 C

Swine
SUS sp.

Tissue	Cases Exposure Route	Range	Mean	General Information
5723 Fetus	38	Not given	4.24 X 10(E-4)+/-1.17 mg/g	Fetuses removed 2 hr after 5 mg/kg to dam on gestation day 109. (Normal gestation 112 day). Hormel miniature PDA strain X Hormel miniature PDA strain. Radiometry
SWINE; BIOACCUMULATION; FETUS; BLOOD; BRAIN; FETAL MEMBRANES; KIDNEYS; LIVER; LUNGS; TERRESTRIAL; DELIBERATE EXPOSURE Ikeda, G.J.; Miller, E.; Sapienza, P.P.; Mich-l, T.C.; King, M.T.; Turner, V.A.; Blumenthal, H.; Jackson, W.E., III; Levin, S. 1983 Food, Cosmetic Toxicology 21(1):49-58				

2,3,4-Trichloroanisole (No postings in CHEMLINE).

Trout, rainbow
SALMO GAIRDNERI

Tissue	Cases Exposure Route	Range	Mean	General Information
5724 Body	6	a) Not given b) Not given c) Not given d) Not given e) Not given	a) 0.47+/-0.17 ng/g b) 0.81+/-0.16 ng/g c) 0.93+/-0.24 ng/g d) 0.80+/-0.10 ng/g e) 0.85+/-0.17 ng/g	a) Day 8 b) Day 21 c) Day 38 d) Day 58 e) Day 90 Days held in flow-through tanks to determine bioconcentration factor 5 chemicals tested at low levels in mixtures with minimal interactive effects Water level 0.90+/-0.12 ng/L. Canada, Ontario GC-EC
BODY; TROUT; AQUATIC; DELIBERATE EXPOSURE; ONTARIO; CANADA; BROMINE ORGANIC COMPOUNDS; CHLORINE ORGANIC COMPOUNDS; BIOCONCENTRATION; FISHES; INDUSTRIAL POLLUTION; WATER POLLUTION Oliver, B.G.; Niimi, A.J. 1984 Environmental Toxicology and Chemistry 3:271-277				

2,4-Dichlorodiphenyl ether (No postings in CHEMLINE).

Trout, rainbow
SALMO GAIRDNERI

Tissue	Cases Exposure Route	Range	Mean	General Information
5725 Body	6	a) Not given b) Not given c) Not given d) Not given e) Not given	a) 3.2+/-1.6 ng/g b) 7.0+/-1.5 ng/g c) 12.0+/-1.5 ng/g d) 21.0+/-5.3 ng/g e) 25.0+/-0.3 ng/g	a) Day 8 b) Day 21 c) Day 38 d) Day 58 e) Day 90 Days held in flow-through tanks to determine bioconcentration factor 5 chemicals tested at low levels in mixtures with minimal interactive effects Water level 2.7+/-1.0 ng/L. Canada, Ontario GC-EC
BODY; TROUT; AQUATIC; DELIBERATE EXPOSURE; ONTARIO; CANADA; BROMINE ORGANIC COMPOUNDS; CHLORINE ORGANIC COMPOUNDS; BIOCONCENTRATION; FISHES; INDUSTRIAL POLLUTION; WATER POLLUTION Oliver, B.G.; Niimi, A.J. 1984 Environmental Toxicology and Chemistry 3:271-277				

2,4,5-Trichlorotoluene (No postings in CHEMLINE).

Trout, rainbow
SALMO GAIRDNERI

Tissue	Cases Exposure Route	Range	Mean	General Information
5726 Body	6	a) Not given b) Not given c) Not given d) Not given e) Not given	a) 0.42+/-0.11 ng/g b) 0.54+/-0.06 ng/g c) 0.51+/-0.08 ng/g d) 0.55+/-0.17 ng/g e) 0.66+/-0.15 ng/g	a) Day 8 b) Day 21 c) Day 38 d) Day 58 e) Day 90 Days held in flow-through tanks to determine bioconcentration factor 5 chemicals tested at low levels in mixtures with minimal interactive effects Water level 0.13+/-0.04 ng/L. Canada, Ontario GC-EC
BODY; TROUT; AQUATIC; DELIBERATE EXPOSURE; ONTARIO; CANADA; BROMINE ORGANIC COMPOUNDS; CHLORINE ORGANIC COMPOUNDS; BIOCONCENTRATION; FISHES; INDUSTRIAL POLLUTION; WATER POLLUTION Oliver, B.G.; Niimi, A.J. 1984 Environmental Toxicology and Chemistry 3:271-277				

2,4,6,3',4'-Pentachlorobiphenyl (No postings in CHEMLINE).
Sandworm
NEREIS VIRENS

Tissue	Cases Exposure Route	Range	Mean	General Information
5727 Body	a) 23 b) 22 c) 22 d) 24 Ingestion	a) 2.4-1.2 ug b) 2.3-0.9 ug c) 2.3-0.9 ug d) 2.3-1.0 ug	a) Not applicable b) Not applicable c) Not applicable d) Not applicable	a) 4 deg C, 0-45 wk after 10 doses of 0.3 ug/d, elimination nearly linear for 25 wk b) 8 deg C, linear elimination 0-35 wk after 10 doses of 0.3 ug/d c) 12 deg C, 0-35 wk, rapid elimination to 1 ug in 15 wk, after 10 doses of 0.3 ug/d d) 16 deg C, 0-38 wk, rapid elimination to 1 ug in 20 wk, after 10 doses of 0.3 ug/d Elimination temperature dependent. Estimated from graph Germany Scintillation counting

BODY; WORMS; AQUATIC; DELIBERATE EXPOSURE; GERMANY; POLYCHLORINATED BIPHENYLS; CHLORINE ORGANIC COMPOUNDS; BIOACCUMULATION; WATER POLLUTION
Goerke, H. 1984 Archives of Environmental Contamination and Toxicology 13:347-355

2H-1-Benzopyran-2-one, 3-(3-(4'-bromo(1,1'-biphenyl)-4-yl)-1,2,3,4-tetrahydro-1-naphthalenyl)-4-hydroxy -
56073-10-0
C31-H23-Br-O3
Owl, barn
TYTO ALBA

Tissue	Cases Exposure Route	Range	Mean	General Information
5728 Body	1	Not given	<0.05 ppm	Juvenile, electrocuted. 1 of 6 analysed for residue, others had levels not detected. Little evidence that barn owls captured or consumed rodents that had eaten TALON bait on farmsteads. New Jersey, southwestern

BODY; OWLS; TERRESTRIAL; ENVIRONMENTAL EXPOSURE; DELIBERATE EXPOSURE; NEW JERSEY; ANTICOAGULANTS; PESTICIDES; PESTICIDE RESIDUES; FARMS; BIOMAGNIFICATION; ANIMAL POPULATIONS
Hegdal, P.L.; Blaskiewicz, R.W. 1984 Environmental Toxicology and Chemistry 3:167-170

4-Chlorophenyl methyl sulfide (No postings in CHEMLINE).

Cattle
BOS sp.

Tissue	Cases Exposure Route	Range	Mean	General Information
5729 Adipose	2 Ingestion	a) Not applicable b) Not applicable c) Not applicable d) Not applicable	a) 31.0%/gX10(E+7) b) 44.0%/gX10(E+7) c) 32.0%/gX10(E+7) d) 45.7%/gX10(E+7)	a) Parent, omental, 1 case b) Sulphone analog, omental, 1 case c) Parent, renal, 1 case d) Sulphone analog, renal, 1 case % label as radiocarbon residue 96 hrs after either 0.57 mCi parent in 10 mg/kg or 0.64 mCi sulphone analog in 10 mg/kg. Two tissue locations examined. Texas Scintillation counting

CHICKENS; FOOD CONTAMINATION; PESTICIDE RESIDUES; TERRESTRIAL; LIVER; ADIPOSE TISSUE; BIOLOGICAL MONITORING; CANADA; BIOACCUMULATION; ENVIRONMENTAL EXPOSURE; MEASUREMENT METHODS

Neidert, E.; Saschenbrecker, P.W.; Patterson, J.R. 1984 Journal of Environmental Science and Health B19(7):579-592

Tissue	Cases Exposure Route	Range	Mean	General Information
5730 Blood, whole	a) 1 b) 1 Ingestion	a) 6-10%/gX10(E+7) b) 8-7%/gX10(E+7)	a) Not applicable b) Not applicable	a) 2-96 hr, peak [12%/gX10(E+7)] 8 hr after 0.57 mCi in 10 mg/kg b) 2-96 hr, peak [85%/gX10(E+7)] 8 hr after 0.64 mCi in 10 mg/kg sulfone analog Pretreatment with unlabeled parent or sulphone at 10 mg/kg/d for 5 d. Estimated from graph. Texas Scintillation counting

BLOOD; URINE; MILK; BRAIN; ADIPOSE TISSUE; HEART; KIDNEYS; LIVER; MUSCLES; OVARIES; SPLEEN; TONGUE; TEXAS; DELIBERATE EXPOSURE; CATTLE; SHEEP; ADULTS; HERBICIDES; PESTICIDES; ACCIDENTAL POISONING; ANIMAL POPULATIONS; BIOACCUMULATION; HEALTH HAZARDS; DRINKING WATER; METABOLITES; RADIONUCLIDES; WATER POLLUTION; TERRESTRIAL

Oehler, D.D.; Ivie, G.W. 1983 Archives of Environmental Contamination and Toxicology 12:227-233

Tissue	Cases Exposure Route	Range	Mean	General Information
5731 Brain	a) 1 b) 1 Ingestion	a) Not applicable b) Not applicable	a) 10.7%/gX10(E+7) b) 9.4%/gX10(E+7)	a) Parent b) Sulphone analog % label as radiocarbon residue 96 hrs after either 0.57 mCi parent in 10 mg/kg or 0.64 mCi Sulphone analog in 10 mg/kg. Texas Scintillation counting
5732 Heart	a) 1 b) 1 Ingestion	a) Not applicable b) Not applicable	a) 11.6%/gX10(E+7) b) 9.7%/gX10(E+7)	a) Parent b) Sulphone analog % label as radiocarbon residue 96 hrs after either 0.57 mCi parent in 10 mg/kg or 0.64 mCi sulphone analog in 10 mg/kg. Texas Scintillation counting

(next page)

4-Chlorophenyl methyl sulfide (No postings in CHEMLINE).

Cattle
BOS sp.

(continued)

Tissue	Cases Exposure Route	Range	Mean	General Information
5733 Kidney	a) 1 b) 1 Ingestion	a) Not applicable b) Not applicable	a) 10.6%/gX10(E+7) b) 10.2%/gX10(E+7)	a) Parent b) Sulphone analog % label as radiocarbon residue 96 hrs after either 0.57 mCi parent in 10 mg/kg or 0.64 mCi sulphone analog in 10 mg/kg. Texas Scintillation counting
5734 Liver	a) 1 b) 1 Ingestion	a) Not applicable b) Not applicable	a) 20.4%/gX10(E+7) b) 18.0%/gX10(E+7)	a) Parent b) Sulphone analog % label as radiocarbon residue 96 hrs after either 0.57 mCi parent in 10 mg/kg or 0.64 mCi sulphone analog in 10 mg/kg. Texas Scintillation counting

CHICKENS; FOOD CONTAMINATION; PESTICIDE RESIDUES; TERRESTRIAL; LIVER; ADIPOSE TISSUE; BIOLOGICAL MONITORING; CANADA; BIOACCUMULATION; ENVIRONMENTAL EXPOSURE; MEASUREMENT METHODS

Neidert, E.; Saschenbrecker, P.W.; Patterson, J.R. 1984 Journal of Environmental Science and Health B19(7):579-592

Tissue	Cases Exposure Route	Range	Mean	General Information
5735 Milk	a) 1 b) 1 Ingestion	a) Not applicable b) Not applicable	a) 3.0% b) 1.0%	a) Parent b) Sulphone analog % in 96 hrs after either 0.57 mCi parent in 10 mg/kg or 0.64 mCi sulphone analog in 10 mg/kg. Texas Scintillation counting
5736 Muscle	2 Ingestion	a) Not applicable b) Not applicable c) Not applicable d) Not applicable	a) 8.8%/gX10(E+7) b) 8.2%/gX10(E+7) c) 7.8%/gX10(E+7) d) 7.4%/gX10(E+7)	a) Parent, LONGISSIMUS DORSI, 1 case b) Sulphone analog, LONGISSIMUS DORSI, 1 case c) Parent, triceps, 1 case d) Sulphone analog, triceps, 1 case % label as radiocarbon residue 96 hrs after either 0.57 mCi parent in 10 mg/kg or 0.64 mCi sulphone analog in 10 mg/kg. Two tissue locations examined. Texas Scintillation counting
5737 Ovary	a) 1 b) 1 Ingestion	a) Not applicable b) Not applicable	a) 14.5%/gX10(E+7) b) 12.5%/gX10(E+7)	a) Parent b) Sulphone analog % label as radiocarbon residue 96 hrs after either 0.57 mCi parent in 10 mg/kg or 0.64 mCi sulphone analog in 10 mg/kg. Texas Scintillation counting

(next page)

4-Chlorophenyl methyl sulfide (No postings in CHEMLINE).

Cattle
BOS sp.

(continued)

Tissue	Cases Exposure Route	Range	Mean	General Information
5738 Spleen	a) 1 b) 1 Ingestion	a) Not applicable b) Not applicable	a) 8.1%/gX10(E+7) b) 6.9%/gX10(E+7)	a) Parent b) Sulphone analog % label as radiocarbon residue 96 hrs after either 0.57 mCi parent in 10 mg/kg or 0.64 mCi sulphone analog in 10 mg/kg. Texas Scintillation counting
5739 Tongue	a) 1 b) 1 Ingestion	a) Not applicable b) Not applicable	a) 9.4%/gX10(E+7) b) 10.8%/gX10(E+7)	a) Parent b) Sulphone analog % label as radiocarbon residue 96 hrs after either 0.57 mCi parent in 10 mg/kg or 0.64 mCi sulphone analog in 10 mg/kg. Texas Scintillation counting
5740 Urine	a) 1 b) 1 Ingestion	a) Not applicable b) Not applicable	a) 8.5% b) 7.0%	a) Parent b) Sulfone analog % 96 hrs after either 0.57 mCi parent in 10 mg/kg or 0.64 mCi sulphone analog in 10 mg/kg. 10% parent and 5% sulphone analog recovered after 96 hrs in feces. Metabolite data given. Texas Scintillation counting

BLOOD; URINE; MILK; BRAIN; ADIPOSE TISSUE; HEART; KIDNEYS; LIVER; MUSCLES; OVARIES; SPLEEN; TONGUE; TEXAS; DELIBERATE EXPOSURE; CATTLE; SHEEP; ADULTS; HERBICIDES; PESTICIDES; ACCIDENTAL POISONING; ANIMAL POPULATIONS; BIOACCUMULATION; HEALTH HAZARDS; DRINKING WATER; METABOLITES; RADIONUCLIDES; WATER POLLUTION; TERRESTRIAL

Oehler, D.D.; Ivie, G.W. 1983 Archives of Environmental Contamination and Toxicology 12:227-233

4-Thia-1-azabicyclo(3.2.0)heptane-2-carboxylic acid, 3,3-dimethyl-7-oxo-6-(2-phenylacetamido)-, compd. with 2-(diethylamino)ethyl p-aminobenzoate (1:1), monohydrate (8 CI); 4-Thia-1-azabicyclo(3.2.0)heptane-2-carboxylic acid, 3,3-dimethyl-7-oxo-6-((phenylacetyl)amino)-(2S-(2alpha,5alpha,6beta))-, compd. with 2-(diethylamino)ethyl 4-aminobenzoate (1:1), monohydrate (9 CI)

6130-64-9
C16-H18-N2-O4-S.C13-H20-N2-O2.H2-O
MW 570.71, MP 106-110 C (decomp)

Cattle
BOS sp.

Tissue	Cases Exposure Route	Range	Mean	General Information
5741 Blood, plasma	12 Injection	a) Not given b) Not given c) Not given d) Not given	a) 0.96+/-0.46 ug/ml b) 0.08+/-0.06 ug/ml c) 1.62+/-0.51 ug/ml d) 0.22+/-0.15 ug/ml	a) Peak 3.5 hr after 10 mg/kg IM, 3 cases b) 24 hr after 10 mg/kg IM, 3 cases c) Peak 2 hr after 20 mg/kg IM, 9 cases d) 24 hr after 20 mg/kg IM, 9 cases. Sweden Well-diffusion

(next page)

4-Thia-1-azabicyclo(3.2.0)heptane-2-carboxylic acid, 3,3-dimethyl-7-oxo-6-(2-phenylacetamido)-, compd. with 2-(diethylamino)ethyl p-aminobenzoate (1:1), monohydrate (8 CI); 4-Thia-1-azabicyclo(3.2.0)heptane-2-carboxylic acid, 3,3-dimethyl-7-oxo-6-((phenylacetyl)amino)-(2S-(2alpha,5alpha,6beta))-, compd. with 2-(diethylamino)ethyl 4-aminobenzoate (1:1), monohydrate (9 CI)
6130-64-9
C16-H18-N2-O4-S.C13-H20-N2-O2.H2-O
MW 570.71, MP 106-110 C (decomp)

Cattle
BOS sp.

(continued)

Tissue	Cases Exposure Route	Range	Mean	General Information
5742 Milk	12 Injection	a) Not given b) Not given c) Not given d) Not given	a) 0.08+/-0.05 ug/ml b) 0.02+/-0.03 ug/ml c) 0.14+/-0.07 ug/ml d) 0.07+/-0.03 ug/ml	a) Mastitic, 10 mg/kg, 3 cases b) Normal, 10 mg/kg, 3 cases c) Mastitic, 20 mg/kg, 9 cases d) Normal, 20 mg/kg, 9 cases 24 hr levels after IM dose. Milk from either normal or experimentally infected udder quarters of same cow. Sweden Well-diffusion
BLOOD PLASMA; MILK; DELIBERATE EXPOSURE; TERRESTRIAL; CATTLE; SWEDEN; INFECTION; ANTIBIOTICS; DRUGS; DRUG THERAPY; BIOACCUMULATION				
Franklin, A.; Holmberg, O.; Horn af Rantzien, M.; Astrom, G. 1984 American Journal of Veterinary Research 45(7):1398-1402				

4-Thia-1-azabicyclo(3.2.0)heptane-2-carboxylic acid, 3,3-dimethyl-7-oxo-6-(2-phenylacetamido)-, monopotassium salt (8 CI); 4-Thia-1-azabicyclo(3.2.0)heptane-2-carboxylic acid, 3,3-dimethyl-7-oxo-6-((phenylacetyl)amino)-(2S-(2alpha,5alpha,6beta))-, monopotassium salt (9 CI)
113-98-4
C16-H12-N2-O4-S.K
MW 372.47, MP 214-217 C (decomp)

Cattle
BOS sp.

Tissue	Cases Exposure Route	Range	Mean	General Information
5743 Milk	6 Injection	a) >8.5-0.7 mIU/ml b) 8.2-2.6 mIU/ml c) 3.1-1.3 mIU/ml	a) Not applicable b) Not applicable c) Not applicable	a) 0.25-60 hr after 2,000,000 IU b) 0.25-12 hr after 1,500,000 IU c) 0.25-12 hr after 1,000,000 IU Intrauterine administration, range of means, detectable levels found in only 2 animals at highest dose after 12 hr. Herd sampled presumed antibiotic-free after 12 hr unless massive doses given to individuals. Plate disk assay
MILK; DELIBERATE EXPOSURE; CATTLE; TERRESTRIAL; ADULTS; INFECTION; ANTIBIOTICS; DRUGS; DRUG THERAPY; FARMS; BIOACCUMULATION; FOOD CONTAMINATION; LACTATION				
McClary, D.G. 1984 American Journal of Veterinary Research 45(3):416-419				

4,7-Methano-1H-indene, 1,2,3,4,5,6,7,8,8-nonachloro-2,3,3a,4,7,7a-hexahydro-, (1alpha,2beta,3alpha,3aalpha,4beta,7beta,7aalpha)-
39765-80-5
C10-H5-Cl9
MW 444.23
Eagle, bald
HALIAEETUS LEUCOCEPHALUS

Tissue	Cases Exposure Route	Range	Mean	General Information
5744 Eggs	95	a) Not applicable b) Not applicable c) 0.22-0.24 ppm d) 0.11-0.21 ppm e) 0.02-0.43 ppm f) 0.07-1.60 ppm g) 0.14-0.34 ppm h) 0.72-1.00 ppm i) 0.42-0.44 ppm j) 0.07-0.42 ppm k) 0.27-0.94 ppm l) 0.27-2.50 ppm m) 0.70-2.70 ppm n) Not applicable o) 0.29-0.72 ppm Fresh wet wt	a) 0.17 ppm b) 0.18 ppm c) 0.23 ppm d) 0.16 ppm e) 0.16 ppm f) 0.46 ppm g) 0.24 ppm h) 0.86 ppm i) 0.43 ppm j) 0.21 ppm k) 0.52 ppm l) 1.44 ppm m) 1.32 ppm n) 0.27 ppm o) 0.45 ppm Fresh wet wt	a) AK, 1976, 1 egg b) OR, 1979, 1 egg c) CA, 1977, 2 eggs d) AZ, 1977, 3 eggs e) MN, 1976-78, 11 eggs f) WI, 1976-78, 27 g) MI, 1969, 1974, 1978, 4 eggs h) OH, 1976, 2 eggs i) NY, 1977-78, 2 eggs j) ME, 1976-79, 12 eggs k) DE, 1977-78, 3 eggs l) MD, 1977-79, 10 eggs m) VA, 1976-77, 1979, 11 eggs n) LA, 1979, 1 egg o) FL, 1976-77, 1979, 5 eggs Levels highest in Chesapeake Bay area. GE-EC; GC-MS; Silica gel chrom.

EGGS; EAGLES; BIRDS; ENVIRONMENTAL EXPOSURE; ALASKA; ARIZONA; CALIFORNIA; DELAWARE; FLORIDA; LOUISIANA; MAINE; MARYLAND; MICHIGAN; MINNESOTA; NEW YORK; OHIO; OREGON; VIRGINIA; WISCONSIN; UNITED STATES; CHLORINATED HYDROCARBONS; CHLORINE ORGANIC COMPOUNDS; DDD; DDE; DDT; DIELDRIN; HEXACHLOROBENZENE; INSECTICIDES; MERCURY; PESTICIDES; POLYCHLORINATED BIPHENYLS; BIOACCUMULATION; PESTICIDE RESIDUES; POPULATION EXPOSURE

Wiemeyer, S.N.; Lamont, T.G.; Bunck, C.M.; Sindelar, C.R.; Gramlich, F.J.; Fraser, J.D.; Byrd, M.A. 1984 Archives of Environmental Contamination and Toxicology 13:529-549

Heron, black-crowned night
NYCTICORAX NYCTICORAX

Tissue	Cases Exposure Route	Range	Mean	General Information
5745 Eggs	147	0.09-0.52 ppm	0.14 ppm Geometric mean	Collected between May 17 and June 1, 1979. Possible sources: nesting and feeding habitats, or migration routes and wintering grounds in Mexico. Colorado; Wyoming GC; EC

EGGS; BIRDS; ENVIRONMENTAL EXPOSURE; COLORADO; WYOMING; CHLORINE ORGANIC COMPOUNDS; DDD; DDE; DDT; DIELDRIN; HEPTACHLOR EPOXIDE; OXYCHLORDANE; NONACHLOR; HEXACHLOROBENZENE; HEXACHLOROCYCLOHEXANE; POLYCHLORINATED BIPHENYLS; ANIMAL POPULATIONS; BIOLOGICAL MONITORING; PESTICIDE RESIDUES; LAND POLLUTION; WATER POLLUTION; AQUATIC

McEwen, L.C.; Stafford, C.J.; Hensler, G.L 1984 Environmental Toxicology and Chemistry 3:367-376

4,7-Methano-1H-indene, 1,2,3,4,5,6,7,8,8-nonachloro-2,3,3a,4,7,7a-hexahydro-, (1alpha,2beta,3alpha,3aalpha,4beta,7beta,7aalpha)-
39765-80-5
C10-H5-Cl9
MW 444.23

Merganser, red-breasted
MERGUS SERRATOR

Tissue	Cases Exposure Route	Range	Mean	General Information
5746 Eggs	a) 49 b) 49	a) Not applicable b) Not applicable	a) 0.21 ppm b) 0.21 ppm Wet wt Geometric means	a) Randomly selected b) Unhatched Collected 1977, pairs from same nests analyzed. Lower limit 0.10 ppm. Lake Michigan, northwestern islands GLC
EGGS; AQUATIC; BIRDS; WATERFOWL; ENVIRONMENTAL EXPOSURE; GREAT LAKES; BROMINATED HYDROCARBONS; CHLORINATED HYDROCARBONS; BROMINE ORGANIC COMPOUNDS; CHLORINE ORGANIC COMPOUNDS; DDE; DDT; DIELDRIN; HEPTACHLOR EPOXIDE; HEXACHLOROBENZENE; INSECTICIDES; MERCURY; NONACHLOR; OXYCHLORDANE; PESTICIDES; POLYBROMINATED BIPHENYLS; POLYCHLORINATED BIPHENYLS; BIOACCUMULATION				
Haseltine, S.D.; Heinz, G.H.; Hensler, G.L.; Reichel, W.L. 1983 Environmental Pollution 32:211-232				

Seal, Weddell
LEPTONYCHOTES WEDDELLI

Tissue	Cases Exposure Route	Range	Mean	General Information
5747 Adipose	a) 1 b) 1 c) 1	a) 19-21 ng/g b) 31-39 ng/g c) 6.6-9.0 ng/g Fresh wt	a) Not applicable b) Not applicable c) Not applicable	a) Female, age 3 yr + 11 mo, fat 77-89% b) Male, age 13 or 14 yr, fat 90-92% c) Male, newborn, fat 24-34%, collected 10/27/81 a) -b) collected 10/5/81. Antarctica, Syowa Station GC/MS
ADIPOSE TISSUE; SEALS; AQUATIC; TERRESTRIAL; ENVIRONMENTAL EXPOSURE; ANTARCTICA; CHLORINE ORGANIC COMPOUNDS; NONACHLOR; OXYCHLORDANE; DDT; POLYCHLORINATED BIPHENYLS; PESTICIDES; AIR POLLUTION; ATMOSPHERE; PESTICIDE RESIDUES; ARCTIC				
Kawano, M.; Inoue, T.; Hidaka, H.; Tatsukawa, R. 1984 Chemosphere 13(1):95-100				

4,7-Methanoindan, 1,2,4,5,6,7,8,8-octachloro-1,2-epoxy-3a,4,7,7a-tetrahydro- (8 CI) 2,5-Methano-2H-indeno(1,2-b)oxirene, 1a,2,3,4,5,6a,7,7-octachloro-1a,1b,5,5a,6,6a-hexahydro- (9 CI)
26880-48-8
C10-H4-Cl8-O
MW 425.77

Bat, gray
MYOTIS GRISESCENS

Tissue	Cases Exposure Route	Range	Mean	General Information
5748 Brain	6	0.67-2.3 ppm	1.12 ppm wet wt	Found dead 7/81. Forearm length 43.1-43.6 cm Missouri, Boone County, Devil's Icebox and Hunter Caves GC-EC
BATS; DIELDRIN; HEPTACHLOR EPOXIDE; OXYCHLORDANE; BIOACCUMULATION; PESTICIDE RESIDUES; BODY; BRAIN; MISSOURI; ADULTS				
Clark, D.R., Jr.; Clawson, R.L.; Stafford, C.J. 1983 Bulletin of Environmental Contamination and Toxicology 30:214-218				

4,7-Methanoindan, 1,2,4,5,6,7,8,8-octachloro-1,2-epoxy-3a,4,7,7a-tetrahydro- (8 CI) 2,5-Methano-2H-indeno(1,2-b)oxirene, 1a,2,3,4,5,6a,7,7-octachloro-1a,1b,5,5a,6,6a-hexahydro- (9 CI)
26880-48-8
C10-H4-Cl8-O
MW 423.77
Eagle, bald
HALIAEETUS LEUCOCEPHALUS

Tissue	Cases Exposure Route	Range	Mean	General Information
5749 Eggs	93	a) Not applicable b) Not applicable c) 0.03-0.06 ppm d) 0.04-0.56 ppm e) 0.07-0.11 ppm f) 0.09-0.10 ppm g) 0.03-0.05 ppm h) 0.06-0.19 ppm i) 0.12-0.20 ppm j) 0.06-0.32 ppm k) 0.06-0.39 ppm l) Not applicable m) 0.05-0.15 ppm Fresh wet wt	a) 0.09 ppm b) 0.04 ppm c) 0.05 ppm d) 0.10 ppm e) 0.09 ppm f) 0.10 ppm g) 0.04 ppm h) 0.12 ppm i) 0.16 ppm j) 0.16 ppm k) 0.24 ppm l) 0.09 ppm m) 0.10 ppm Fresh wet wt	a) AK, 1976, 1 egg b) OR, 1979, 1 egg c) MN, 1972, 1976, 1978, 6 eggs d) WI, 1976-79, 28 eggs e) MI, 1969, 1978, 3 eggs f) OH, 1976, 2 eggs h) ME, 1974-79, 18 eggs i) DE, 1977-78, 3 eggs j) MD, 1977-79, 10 eggs k) VA, 1976-77, 1979, 11 eggs l) LA, 1979, 1 egg m) FL, 1975-77, 1979, 6 eggs In most eggs analysed. Highest levels in Chesapeake Bay area. GE-EC; GC-MS; Silica gel chrom.

EGGS; EAGLES; BIRDS; ENVIRONMENTAL EXPOSURE; ALASKA; ARIZONA; CALIFORNIA; DELAWARE; FLORIDA; LOUISIANA; MAINE; MARYLAND; MICHIGAN; MINNESOTA; NEW YORK; OHIO; OREGON; VIRGINIA; WISCONSIN; UNITED STATES; CHLORINATED HYDROCARBONS; CHLORINE ORGANIC COMPOUNDS; DDD; DDE; DDT; DIELDRIN; HEXACHLOROBENZENE; INSECTICIDES; MERCURY; PESTICIDES; POLYCHLORINATED BIPHENYLS; BIOACCUMULATION; PESTICIDE RESIDUES; POPULATION EXPOSURE

Wiemeyer, S.N.; Lamont, T.G.; Bunck, C.M.; Sindelar, C.R.; Gramlich, F.J.; Fraser, J.D.; Byrd, M.A. 1984 Archives of Environmental Contamination and Toxicology 13:529-549

Heron, black-crowned night
NYCTICORAX NYCTICORAX

Tissue	Cases Exposure Route	Range	Mean	General Information
5750 Eggs	147	0.06-0.24 ppm	0.13 ppm Geometric mean	Collected between May 17 and June 1, 1979. Possible sources: nesting and feeding habitats, or migration routes and wintering grounds in Mexico. Colorado; Wyoming GC; EC

EGGS; BIRDS; ENVIRONMENTAL EXPOSURE; COLORADO; WYOMING; CHLORINE ORGANIC COMPOUNDS; DDD; DDE; DDT; DIELDRIN; HEPTACHLOR EPOXIDE; OXYCHLORDANE; NONACHLOR; HEXACHLOROBENZENE; HEXACHLOROCYCLOHEXANE; POLYCHLORINATED BIPHENYLS; ANIMAL POPULATIONS; BIOLOGICAL MONITORING; PESTICIDE RESIDUES; LAND POLLUTION; WATER POLLUTION; AQUATIC

McEwen, L.C.; Stafford, C.J.; Hensler, G.L 1984 Environmental Toxicology and Chemistry 3:367-376

4,7-Methanoindan, 1,2,4,5,6,7,8,8-octachloro-1,2-epoxy-3a,4,7,7a-tetrahydro- (8 CI) 2,5-Methano-2H-indeno(1,2-b)oxirene, 1a,2,3,4,5,6a,7,7-octachloro-1a,1b,5,5a,6,6a-hexahydro- (9 CI)
26880-48-8
C10-H4-Cl8-O
MW 423.77

Heron, green-backed
BUTORIDES STRIATUS

Tissue	Cases Exposure Route	Range	Mean	General Information
5751 Body	1	a) Not given b) Not given	a) 0.08 ppm b) 0.45 ppm Wet wt	a) Lake Bruin b) Lake Providence Collected 6/15-9/25/80. Tertiary consumer, major foods are fish. Lakes acting as sumps. Immature birds are good monitors of organochlorine contamination. Louisiana GC
BODY; ENVIRONMENTAL EXPOSURE; LOUISIANA; CHLORINE ORGANIC COMPOUNDS; INSECTICIDES; BIOMAGNIFICATION; FISHES; AGRICULTURE; PESTICIDE RESIDUES; AQUATIC; TERRESTRIAL; BIRDS; SNAKES; FROGS; CRAYFISH				
Niethammer, K.R.; White, D.H.; Baskett, T.S.; Sayre, M.W. 1984 Archives of Contamination and Toxicology 13:63-74				

Heron, little blue
EGRETTA CAERULEA

Tissue	Cases Exposure Route	Range	Mean	General Information
5752 Body	1	Not given	0.07 ppm Wet wt	Lake Bruin Collected 6/15-9/25/80. Tertiary consumer, major foods are small fish and invertebrates. Lakes acting as sumps. Louisiana GC
BODY; ENVIRONMENTAL EXPOSURE; LOUISIANA; CHLORINE ORGANIC COMPOUNDS; INSECTICIDES; BIOMAGNIFICATION; FISHES; AGRICULTURE; PESTICIDE RESIDUES; AQUATIC; TERRESTRIAL; BIRDS; SNAKES; FROGS; CRAYFISH				
Niethammer, K.R.; White, D.H.; Baskett, T.S.; Sayre, M.W. 1984 Archives of Contamination and Toxicology 13:63-74				

Merganser, red-breasted
MERGUS SERRATOR

Tissue	Cases Exposure Route	Range	Mean	General Information
5753 Eggs	a) 49 b) 49	a) Not applicable b) Not applicable	a) 0.27 ppm b) 0.24 ppm Wet wt Geometric means	a) Randomly selected b) Unhatched Collected 1977, pairs from same nests analyzed. Lower limit 0.10 ppm. Lake Michigan, northwestern islands GLC
EGGS; AQUATIC; BIRDS; WATERFOWL; ENVIRONMENTAL EXPOSURE; GREAT LAKES; BROMINATED HYDROCARBONS; CHLORINATED HYDROCARBONS; BROMINE ORGANIC COMPOUNDS; CHLORINE ORGANIC COMPOUNDS; DDE; DDT; DIELDRIN; HEPTACHLOR EPOXIDE; HEXACHLOROBENZENE; INSECTICIDES; MERCURY; NONACHLOR; OXYCHLORDANE; PESTICIDES; POLYBROMINATED BIPHENYLS; POLYCHLORINATED BIPHENYLS; BIOACCUMULATION				
Haseltine, S.D.; Heinz, G.H.; Hensler, G.L.; Reichel, W.L. 1983 Environmental Pollution 32:211-232				

4,7-Methanoindan, 1,2,4,5,6,7,8,8-octachloro-1,2-epoxy-3a,4,7,7a-tetrahydro- (8 CI) 2,5-Methano-2H-indeno(1,2-b)oxirene, 1a,2,3,4,5,6a,7,7-octachloro-1a,1b,5,5a,6,6a-hexahydro- (9 CI)
26880-48-8
C10-H4-Cl8-O
MW 423.77
Seal, Weddell
LEPTONYCHOTES WEDDELLI

Tissue	Cases Exposure Route	Range	Mean	General Information
5754 Adipose	a) 1 b) 1 c) 1	a) 6.0-7.1 ng/g b) 9.8-12 ng/g c) 2.0-2.2 ng/g Fresh wt	a) Not applicable b) Not applicable c) Not applicable	a) Female, age 3 yr + 11 mo, fat 77-89% b) Male, age 13 or 14 yr, fat 90-92% c) Male, newborn, fat 24-34%, collected 10/27/81 a) -b) collected 10/9/81. Antarctica, Syowa Station GC/MS

ADIPOSE TISSUE; SEALS; AQUATIC; TERRESTRIAL; ENVIRONMENTAL EXPOSURE; ANTARCTICA; CHLORINE ORGANIC COMPOUNDS; NONACHLOR; OXYCHLORDANE; DDT; POLYCHLORINATED BIPHENYLS; PESTICIDES; AIR POLLUTION; ATMOSPHERE; PESTICIDE RESIDUES; ARCTIC

Kawano, M.; Inoue, T.; Hidaka, H.; Tatsukawa, R. 1984 Chemosphere 13(1):95-100

4,7-Methanoindan, 1,4,5,6,7,8,8-heptachloro-2,3-epoxy-3a,4,7,7a-tetrahydro- (8 CI); 2,5-Methano-2H-indeno(1,2-b)oxirene, 2,3,4,5,6,7,7-heptachloro-1a,1b,5,5a,6,6a-hexahydro-, (1aalpha,1bbeta,2alpha,5alpha,5abeta,6beta,6aalpha)- (9 CI)
1024-57-3
C10-H5-Cl7-O
MW 389.40, MP 160-161.5 C
Bat, gray
MYOTIS GRISESCENS

Tissue	Cases Exposure Route	Range	Mean	General Information
5755 Brain	6	1.1-9.6 ppm wet wt	5.03 ppm wet wt	Found dead 7/81. Forearm length 43.1-43.6 cm Missouri, Boone County, Devil's Icebox and Hunter Caves GC-EC

BATS; DIELDRIN; HEPTACHLOR EPOXIDE; OXYCHLORDANE; BIOACCUMULATION; PESTICIDE RESIDUES; BODY; BRAIN; MISSOURI; ADULTS

Clark, D.R., Jr.; Clawson, R.L.; Stafford, C.J. 1983 Bulletin of Environmental Contamination and Toxicology 30:214-218

4,7-Methanoindan, 1,4,5,6,7,8,8-heptachloro-2,3-epoxy-3a,4,7,7a-tetrahydro- (8 CI); 2,5-Methano-2H-indeno(1,2-b)oxirene, 2,3,4,5,6,7,7-heptachloro-1a,1b,5,5a,6,6a-hexahydro-, (1aalpha,1bbeta,2alpha,5alpha,5abeta,6beta,6aalpha)- (9 CI)
1024-57-3
C10-H5-Cl7-O
MW 389.40, MP 160-161.5 C

Cattle
BOS sp.

Tissue	Cases Exposure Route	Range	Mean	General Information
5756 Adipose	a) 1 b) 1	a) Not applicable b) Not applicable	a) 190 mg/kg b) 450 mg/kg	a) Cow b) Calf (14 d old) Sampled 51 d after first clinical case. Removed day 40 from contaminated pasture (up to 1,800 l of 0.5% heptachlor/ha). Perirenal fat. Data also given on level in milk. Australia Nervous signs
5757 Blood, whole	a) 1 b) 1	a) Not applicable b) Not applicable	a) 0.71 mg/l b) 1.3 mg/l	a) Cow b) Calf (14 d old) Sampled 51 d after first clinical case. Removed day 40 from contaminated pasture (up to 1,800 l of 0.5% heptachlor/ha). Data also given on level in milk. Australia Nervous signs
CHLORINE ORGANIC COMPOUNDS; CATTLE; PESTICIDE RESIDUES; PESTICIDES; HORSES; BLOOD; ADIPOSE TISSUE				
Dickson, J.; Peet, R.L.; Duffy, R.J.; Bolton, J.; Hilbert, B.; McGill, C. 1984 Australian Veterinary Journal 61(10):331				

Tissue	Cases Exposure Route	Range	Mean	General Information
5758 Milk	Ingestion	a) 0.03-0.05 ppm b) 0.04-0.04 ppm c) 0.05-0.06 ppm d) 0.07-0.05 ppm e) 0.08-0.05 ppm	a) Not given b) Not given c) Not given d) Not given e) Not given	a) 1972 & 3 b) 1974 & 5 c) 1976 & 7 d) 1978 & 9 e) 1980 & 1 Range of yearly means. Composite samples from several farms. Data includes parent compound Heptachlor. Levels constant over 10 yr. In statewide monitoring for chlorinated hydrocarbon insecticides, percentage contaminated samples decreased over study period. Illinois GC/MS
INSECTICIDES; PESTICIDE RESIDUES; MILK; CATTLE; ILLINOIS; BIOLOGICAL MONITORING; BIOCONCENTRATION; ALDRIN; DIELDRIN; DDT; METABOLITES; HEPTACHLOR EPOXIDE; TERRESTRIAL; CHLORINATED HYDROCARBONS; ENVIRONMENTAL EXPOSURE; HEXACHLOROCYCLOHEXANE				
Steffey, K.L.; Mack, J.; MacMonegle, C.W.; Pettyl, H.B. 1984 Journal of Environmental Science and Health B19(1):49-65				

4,7-Methanoindan, 1,4,5,6,7,8,8-heptachloro-2,3-epoxy-3a,4,7,7a-tetrahydro- (8 CI); 2,5-Methano-2H-indeno(1,2-b)oxirene, 2,3,4,5,6,7,7-heptachloro-1a,1b,5,5a,6,6a-hexahydro-, (1aalpha,1bbeta,2alpha,5alpha,5abeta,6beta,6aalpha)- (9 CI)
1024-57-3
C10-H5-Cl7-O
MW 389.40, MP 160-161.5 C

Clam
MEGAPITARIA SQUALIDA

Tissue	Cases Exposure Route	Range	Mean	General Information
5759 Body	16	Not given	1.20 ppb Wet wt	Collected 7/80. Mexico (NW), Sonora, Yavaros lagoon system GC
CRUSTACEANS; MOLLUSKS; MUSCLES; CHLORINE ORGANIC COMPOUNDS; MEXICO; BODY; BIOACCUMULATION; FISHES; PESTICIDE RESIDUES; WATER POLLUTION; AQUATIC; ENVIRONMENTAL EXPOSURE				
Rosales, M.T.L.; Escalona, R.L. 1983 Bulletin of Environmental Contamination and Toxicology 30:456-463				

Clam, Asiatic
CORBICULA MANILENSIS

Tissue	Cases Exposure Route	Range	Mean	General Information
5760 Body, whole	9	<0.1-0.6 ug/kg Dry wt	0.3 ug/kg Dry wt Median	Trend in concentration increase from inorganic to organic to living material. August 1979-May 1980, sampling dates. Non-point sources. No significant seasonal, temporal or spatial variability reported. Florida, Apalachicola River GC-EC
BODY; ASIATIC CLAM; AQUATIC; ENVIRONMENTAL EXPOSURE; FLORIDA; TRACE ELEMENTS; PESTICIDES; POLYCHLORINATED BIPHENYLS; CHROMIUM; COPPER; LEAD; MANGANESE; MERCURY; ZINC; DDD; ORGANOPHOSPHATES; DDE; DDT; DIELDRIN; HEPTACHLOR EPOXIDE; INSECTICIDES; GEOLOGY				
Elder, J.F.; Mattraw, H.C. 1984 Archives of Environmental Contamination and Toxicology 13:453-469				

Crab
CALLINECTES ARCUATUS

Tissue	Cases Exposure Route	Range	Mean	General Information
5761 Body	a) 5 b) 5	a) Not given b) Not given	a) 0.19 ppb b) 0.30 ppb Wet wt	a) Caimanero, 10/80 b) Yavaros, 1/81. Mexico (NW), Sinaloa, Huizache-Caimanero lagoon system; Mexico (NW), Sonora, Yavaros lagoon system GC
CRUSTACEANS; MOLLUSKS; MUSCLES; CHLORINE ORGANIC COMPOUNDS; MEXICO; BODY; BIOACCUMULATION; FISHES; PESTICIDE RESIDUES; WATER POLLUTION; AQUATIC; ENVIRONMENTAL EXPOSURE				
Rosales, M.T.L.; Escalona, R.L. 1983 Bulletin of Environmental Contamination and Toxicology 30:456-463				

4,7-Methanoindan, 1,4,5,6,7,8,8-heptachloro-2,3-epoxy-3a,4,7,7a-tetrahydro- (8 CI); 2,5-Methano-2H-indeno(1,2-b)oxirene, 2,3,4,5,6,7,7-heptachloro-1a,1b,5,5a,6,6a-hexahydro-, (1aalpha,1bbeta,2alpha,5alpha,5abeta,6beta,6aalpha)- (9 CI)
1024-57-3
C10-H5-Cl7-O
MW 389.40, MP 160-161.5 C

Dove, mourning
ZENAIDURA MACROURA

Tissue	Cases Exposure Route	Range	Mean	General Information
5762 Adipose	2	<0.0001-0.132 ppm	0.0497 ppm	None in 2 birds (same species). Levels lower than in woodcock. None contained heptachlor. Illinois, Vermilion and Shelby Counties GC-EC
5763 Brain	2	<0.0001-0.0816 ppm	0.0247 ppm	None in 2 birds (same species). Levels higher than in woodcock, lower than in robins. None contained heptachlor. Illinois, Vermilion and Shelby Counties GC-EC
5764 Heart	2	<0.0001-0.0174 ppm	0.0032 ppm	None in 4 birds (same species). Levels lower than in woodcock or robins. None contained heptachlor. Illinois, Vermilion and Shelby Counties GC-EC
5765 Liver	5	<0.0001-0.0245 ppm	0.0079 ppm	None in 2 birds (same species). Levels higher than in woodcock, lower than in robins. None contained heptachlor. Illinois, Vermilion and Shelby Counties GC-EC
5766 Muscle	5	<0.0001-0.121 ppm	0.0203 ppm	None in 3 birds (same species). Levels higher than in woodcock, lower than in robins. None contained heptachlor. Illinois, Vermilion and Shelby Counties GC-EC

ADIPOSE TISSUE; BRAIN; MUSCLES; LIVER; HEART; TERRESTRIAL; BIRDS; ENVIRONMENTAL EXPOSURE; ILLINOIS; CHLORINATED HYDROCARBONS; CHLORINE ORGANIC COMPOUNDS; DDE, DIELDRIN; HEPTACHLOR EPOXIDE; INSECTICIDES; PESTICIDES; POLYCHLORINATED BIPHENYLS; BIOACCUMULATION; FOOD CONTAMINATION; PESTICIDE RESIDUES

Edwards, W.R.; Dusan, R.E.; Siemers, R.J. 1983 Bulletin of Environmental Contamination and Toxicology 31:407-414

4,7-Methanoindan, 1,4,5,6,7,8,8-heptachloro-2,3-epoxy-3a,4,7,7a-tetrahydro- (8 CI); 2,5-Methano-2H-indeno(1,2-b)oxirene, 2,3,4,5,6,7,7-heptachloro-1a,1b,5,5a,6,6a-hexahydro-, (1aalpha,1bbeta,2alpha,5alpha,5abeta,6beta,6aalpha)- (9 CI)
1024-57-3
C10-H5-Cl7-O
MW 389.40, MP 160-161.5 C

Eagle, bald
HALIAEETUS LEUCOCEPHALUS

Tissue	Cases Exposure Route	Range	Mean	General Information
5767 Eggs	86	a) Not applicable b) 0.03-0.20 ppm c) 0.02-0.36 ppm d) 0.05-0.10 ppm e) 0.20-0.22 ppm f) 0.02-0.05 ppm g) 0.02-0.20 ppm h) 0.04-0.07 ppm i) 0.03-0.24 ppm j) 0.04-0.26 ppm k) Not applicable l) 0.04-0.10 ppm Fresh wet wt	a) 0.05 ppm b) 0.09 ppm c) 0.11 ppm d) 0.07 ppm e) 0.21 ppm f) 0.03 ppm g) 0.05 ppm h) 0.05 ppm i) 0.11 ppm j) 0.13 ppm k) 0.09 ppm l) 0.07 ppm Fresh wet wt	a) OR, 1979, 1 egg b) MN, 1972, 1976-78, 9 eggs c) WI, 1976-79, 31 eggs d) MI, 1969, 1974, 1976, 3 eggs e) OH, 1976, 2 eggs f) NY, 1971, 1978, 2 eggs g) ME, 1974-79, 11 eggs h) DE, 1977-78, 3 eggs i) MD, 1977-78, 9 eggs j) VA, 1976-77, 1979, 11 eggs k) LA, 1979, 1 egg l) FL, 1976, 1977, 3 eggs In most eggs analyzed. Highest levels in Chesapeake Bay area. GE-EC; GC-MS; Silica gel chrom.

EGGS; EAGLES; BIRDS; ENVIRONMENTAL EXPOSURE; ALASKA; ARIZONA; CALIFORNIA; DELAWARE; FLORIDA; LOUISIANA; MAINE; MARYLAND; MICHIGAN; MINNESOTA; NEW YORK; OHIO; OREGON; VIRGINIA; WISCONSIN; UNITED STATES; CHLORINATED HYDROCARBONS; CHLORINE ORGANIC COMPOUNDS; DDD; DDE; DDT; DIELDRIN; HEXACHLOROBENZENE; INSECTICIDES; MERCURY; PESTICIDES; POLYCHLORINATED BIPHENYLS; BIOACCUMULATION; PESTICIDE RESIDUES; POPULATION EXPOSURE

Wiemeyer, S.N.; Lamont, T.G.; Bunck, C.M.; Sindelar, C.R.; Gramlich, F.J.; Fraser, J.D.; Byrd, M.A. 1984 Archives of Environmental Contamination and Toxicology 13:529-549

Eagle, booted
HIERAETUS PENNATUS

Tissue	Cases Exposure Route	Range	Mean	General Information
5768 Eggs	a) 1 b) 3 Ingestion	a) Not given b) Not given	a) 0.082 ppm b) 0.033 ppm Wet wt	a) Collected 1981 b) 1983 Spain GLC

EGGS; ENVIRONMENTAL EXPOSURE; SPAIN; ADULTS; METAL POISONING; DDE; DDD; DDT; DIELDRIN; HEXACHLOROCYCLOHEXANE; HEPTACHLOR EPOXIDE; ALDRIN; POLYCHLORINATED BIPHENYLS; MERCURY; LEAD; CADMIUM; COPPER; ZINC; BIOACCUMULATION; BIOCONCENTRATION; HEALTH HAZARDS; PESTICIDE RESIDUES; BIRDS; TERRESTRIAL

Gonzales, M.J.; Hernandez, L.M.; Rico, M.C.; Baluja, G. 1984 Journal of Environmental Health and Science

4,7-Methanoindan, 1,4,5,6,7,8,8-heptachloro-2,3-epoxy-3a,4,7,7a-tetrahydro- (8 CI); 2,5-Methano-2H-indeno(1,2-b)oxirene, 2,3,4,5,6,7,7-heptachloro-1a,1b,5,5a,6,6a-hexahydro-, (1aalpha,1bbeta,2alpha,5alpha,5abeta,6beta,6aalpha)- (9 CI)
1024-57-3
C10-H5-Cl7-O
MW 389.40, MP 160-161.5 C

Eagle, imperial
AQUILA HELIACA

Tissue	Cases Exposure Route	Range	Mean	General Information
5769 Eggs	a) 6 b) 3 c) 3 d) 10 Ingestion	a) Not given b) Not given c) Not given d) Not given	a) 0.077 ppm b) 0.038 ppm c) 0.081 ppm d) 0.041 ppm Wet wt	a) Collected 1980 b) 1981 c) 1982 d) 1983. Spain GLC
EGGS; ENVIRONMENTAL EXPOSURE; SPAIN; ADULTS; METAL POISONING; DDE; DDD; DDT; DIELDRIN; HEXACHLOROCYCLOHEXANE; HEPTACHLOR EPOXIDE; ALDRIN; POLYCHLORINATED BIPHENYLS; MERCURY; LEAD; CADMIUM; COPPER; ZINC; BIOACCUMULATION; BIOCONCENTRATION; HEALTH HAZARDS; PESTICIDE RESIDUES; BIRDS; TERRESTRIAL Gonzales, M.J.; Hernandez, L.M.; Rico, M.C.; Baluja, G. 1984 Journal of Environmental Health and Science				

Flounder
PARALICHTYS WOOLINARIA

Tissue	Cases Exposure Route	Range	Mean	General Information
5770 Muscle	1	Not given	0.65 ppb Wet wt	Collected 1/81. Mexico (NW), Sonora, Yavaros lagoon system GC
CRUSTACEANS; MOLLUSKS; MUSCLES; CHLORINE ORGANIC COMPOUNDS; MEXICO; BODY; BIOACCUMULATION; FISHES; PESTICIDE RESIDUES; WATER POLLUTION; AQUATIC; ENVIRONMENTAL EXPOSURE Rosales, M.T.L.; Escalona, R.L. 1983 Bulletin of Environmental Contamination and Toxicology 30:456-463				

Gar, spotted
LEPISOSTEUS OCULATUS

Tissue	Cases Exposure Route	Range	Mean	General Information
5771 Body	a) 1 b) 1	a) Not given b) Not given	a) 0.08 ppm b) 0.23 ppm Wet wt	a) Lake Providence, 11.1% lipids b) Lake Bruin, 2.7% lipids Collected 6/15-9/25/80. Tertiary consumers, major foods are fish. Lakes acting as sumps. Louisiana GC
BODY; ENVIRONMENTAL EXPOSURE; LOUISIANA; CHLORINE ORGANIC COMPOUNDS; INSECTICIDES; BIOMAGNIFICATION; FISHES; AGRICULTURE; PESTICIDE RESIDUES; AQUATIC; TERRESTRIAL; BIRDS; SNAKES; FROGS; CRAYFISH Niethammer, K.R.; White, D.H.; Baskett, T.S.; Sayre, M.W. 1984 Archives of Contamination and Toxicology 13:63-74				

4,7-Methanoindan, 1,4,5,6,7,8,8-heptachloro-2,3-epoxy-3a,4,7,7a-tetrahydro- (8 CI); 2,5-Methano-2H-indeno(1,2-b)oxirene, 2,3,4,5,6,7,7-heptachloro-1a,1b,5,5a,6,6a-hexahydro-, (1aalpha,1bbeta,2alpha,5alpha,5abeta,6beta,6aalpha)- (9 CI)
1024-57-3
C10-H5-Cl7-O
MW 389.40, MP 160-161.5 C

Heron, black-crowned night
NYCTICORAX NYCTICORAX

Tissue	Cases Exposure Route	Range	Mean	General Information
5772 Eggs	147	0.08-0.48 ppm	0.17 ppm Geometric mean	Collected between May 17 and June 1, 1979. Possible sources: nesting and feeding habitats, or migration routes and wintering grounds in Mexico. Colorado; Wyoming GC; EC
EGGS; BIRDS; ENVIRONMENTAL EXPOSURE; COLORADO; WYOMING; CHLORINE ORGANIC COMPOUNDS; DDD; DDE; DDT; DIELDRIN; HEPTACHLOR EPOXIDE; OXYCHLORDANE; NONACHLOR; HEXACHLOROBENZENE; HEXACHLOROCYCLOHEXANE; POLYCHLORINATED BIPHENYLS; ANIMAL POPULATIONS; BIOLOGICAL MONITORING; PESTICIDE RESIDUES; LAND POLLUTION; WATER POLLUTION; AQUATIC				
McEwen, L.C.; Stafford, C.J.; Hensler, G.L 1984 Environmental Toxicology and Chemistry 3:367-376				

Heron, green-backed
BUTORIDES STRIATUS

Tissue	Cases Exposure Route	Range	Mean	General Information
5773 Body	1	Not given	0.29 Wet wt	Lake Providence. Collected 6/15-9/25/80. Tertiary consumer, major foods are fish. Lake acting as sump. Immature birds are good monitors of organochlorine contamination. Louisiana GC
BODY; ENVIRONMENTAL EXPOSURE; LOUISIANA; CHLORINE ORGANIC COMPOUNDS; INSECTICIDES; BIOMAGNIFICATION; FISHES; AGRICULTURE; PESTICIDE RESIDUES; AQUATIC; TERRESTRIAL; BIRDS; SNAKES; FROGS; CRAYFISH				
Niethammer, K.R.; White, D.H.; Baskett, T.S.; Sayre, M.W. 1984 Archives of Contamination and Toxicology 13:63-74				

Hobby
FALCO SUBBUTEO

Tissue	Cases Exposure Route	Range	Mean	General Information
5774 Eggs	a) 3 b) 4 Ingestion	a) Not given b) Not given	a) 0.049 ppm b) 0.030 ppm Wet wt	a) Collected 1982 b) 1983. Spain GLC
EGGS; ENVIRONMENTAL EXPOSURE; SPAIN; ADULTS; METAL POISONING; DDE; DDD; DDT; DIELDRIN; HEXACHLOROCYCLOHEXANE; HEPTACHLOR EPOXIDE; ALDRIN; POLYCHLORINATED BIPHENYLS; MERCURY; LEAD; CADMIUM; COPPER; ZINC; BIOACCUMULATION; BIOCONCENTRATION; HEALTH HAZARDS; PESTICIDE RESIDUES; BIRDS; TERRESTRIAL				
Gonzales, M.J.; Hernandez, L.M.; Rico, M.C.; Baluja, G. 1984 Journal of Environmental Health and Science				

4,7-Methanoindan, 1,4,5,6,7,8,8-heptachloro-2,3-epoxy-3a,4,7,7a-tetrahydro- (8 CI); 2,5-Methano-2H-indeno(1,2-b)oxirene, 2,3,4,5,6,7,7-heptachloro-1a,1b,5,5a,6,6a-hexahydro-, (1aalpha,1bbeta,2alpha,5alpha,5abeta,6beta,6aalpha)- (9 CI)
1024-57-3
C10-H5-Cl7-O
MW 389.40, MP 160-161.5 C

Horse
EQUUS CABALLUS

Tissue	Cases Exposure Route	Range	Mean	General Information
5775 Blood, whole	a) 3 b) 15 c) 2 d) 1 e) 2	a) Not detected b) 0.006-0.028 mg/l c) 0.32-0.45 mg/l d) Not applicable e) 0.067-0.080 mg/l	a) Not detected b) Not given c) 0.39 mg/l d) 0.28 mg/l e) 0.074 mg/l	a) Mares, unexposed, sampled day 19 after first clinical case b) Mares, clinically unaffected, sampled day 111 c) Mares, recovered, sampled day 19 and 26 respectively d) Mare, aborted, then died, sampled day 26 e) foals (7 d old), unaffected, sampled day 111 All mares removed from contaminated pasture (up to 1,800 l of 0.5% heptachlor/ha) on day 28. Data also given on levels in milk, brain. Australia
CHLORINE ORGANIC COMPOUNDS; CATTLE; PESTICIDE RESIDUES; PESTICIDES; HORSES; BLOOD; ADIPOSE TISSUE				
Dickson, J.; Peet, R.L.; Duffy, R.J.; Bolton, J.; Hilbert, B.; McGill, C. 1984 Australian Veterinary Journal 61(10):331				

Kite, black
MILVUS MIGRANS

Tissue	Cases Exposure Route	Range	Mean	General Information
5776 Eggs	a) 2 b) 5 c) 4 Ingestion	a) Not given b) Not given c) Not given	a) 0.007 ppm b) 0.183 ppm c) 0.199 ppm Wet wt	a) Collected 1981 b) 1982 c) 1983 Spain GLC
EGGS; ENVIRONMENTAL EXPOSURE; SPAIN; ADULTS; METAL POISONING; DDE; DDD; DDT; DIELDRIN; HEXACHLOROCYCLOHEXANE; HEPTACHLOR EPOXIDE; ALDRIN; POLYCHLORINATED BIPHENYLS; MERCURY; LEAD; CADMIUM; COPPER; ZINC; BIOACCUMULATION; BIOCONCENTRATION; HEALTH HAZARDS; PESTICIDE RESIDUES; BIRDS; TERRESTRIAL				
Gonzalez, M.J.; Hernandez, L.M.; Rico, M.C.; Baluja, G. 1984 Journal of Environmental Health and Science				

Kite, red
MILVUS MILVUS

Tissue	Cases Exposure Route	Range	Mean	General Information
5777 Eggs	a) 4 b) 4 c) 2 Ingestion	a) Not given b) Not given c) Not given	a) 0.059 ppm b) 0.106 ppm c) 0.156 ppm Wet wt	a) Collected 1981 b) 1982 c) 1983 Spain GLC
EGGS; ENVIRONMENTAL EXPOSURE; SPAIN; ADULTS; METAL POISONING; DDE; DDD; DDT; DIELDRIN; HEXACHLOROCYCLOHEXANE; HEPTACHLOR EPOXIDE; ALDRIN; POLYCHLORINATED BIPHENYLS; MERCURY; LEAD; CADMIUM; COPPER; ZINC; BIOACCUMULATION; BIOCONCENTRATION; HEALTH HAZARDS; PESTICIDE RESIDUES; BIRDS; TERRESTRIAL				
Gonzales, M.J.; Hernandez, L.M.; Rico, M.C.; Baluja, G. 1984 Journal of Environmental Health and Science				

4,7-Methanoindan, 1,4,5,6,7,8,8-heptachloro-2,3-epoxy-3a,4,7,7a-tetrahydro- (8 CI); 2,5-Methano-2H-indeno(1,2-b)oxirene, 2,3,4,5,6,7,7-heptachloro-1a,1b,5,5a,6,6a-hexahydro-, (1aalpha,1bbeta,2alpha,5alpha,5abeta,6beta,6aalpha)- (9 CI)
1024-57-3
C10-H5-Cl7-O
MW 389.40, MP 160-161.5 C

Loon, common
GAVIA IMMER

Tissue	Cases Exposure Route	Range	Mean	General Information
5778 Adipose	a) 11 b) 37	a) Not given b) Not given	a) <0.01 ug/g b) 1.03+/-1.33 ug/g Wet wt	a) Unknown condition, collected in 1969, 62.0+/-13.1% fat b) Collected in 1974. Canada, Ontario, Kinoje Lake; Algonquin Park; Parry Sound GC
5779 Brain	a) 11 b) 38 c) 1	a) Not given b) Not given c) Not given	a) <0.01 ug/g b) <0.01 ug/g c) 0.15 ug/g Wet wt	a) Unknown condition, collected in 1969, 7.76+/-1.12% fat b) Healthy, collected in 1978-79, 6.16+/-0.59% fat c) Emaciated, collected in 1978-79, 7.13% fat. Canada, Ontario, Kinoje Lake; Algonquin Park; Parry Sound GC
5780 Embryos	a) 12 b) 19	a) Not given b) Not given	a) 0.05+/-0.02 ug/g b) 0.07+/-0.03 ug/g Wet wt	a) Collected in 1978 from Algonquin-Parry Sound b) In 1979-80. Canada, Ontario, Kinoje Lake; Algonquin Park; Parry Sound GC
5781 Liver	37	Not given	0.04+/-0.09 ug/g Wet wt	Collected in 1974. Canada, Ontario, Kinoje Lake; Algonquin Park; Parry Sound GC
5782 Muscle	a) 21 b) 37	a) Not given b) Not given	a) <0.01 ug/kg b) 0.03+/-0.04 ug/g Wet wt	a) Healthy condition, collected in 1978-79, 2.59+/-1.16% fat b) Collected in 1974. Canada, Ontario, Kinoje Lake; Algonquin Park; Parry Sound GC

EGGS; BRAIN; ADIPOSE TISSUE; LIVER; MUSCLES; FEATHERS; INTESTINES; EMBRYOS; DDT; DDE; DIELDRIN; HEPTACHLOR EPOXIDE; POLYCHLORINATED BIPHENYLS; HEXACHLOROBENZENE; MERCURY; CHLORINE ORGANIC COMPOUNDS; PESTICIDES; PESTICIDE RESIDUES; BIOINDICATORS; BIOLOGICAL MONITORING; BIOACCUMULATION; LUNGS; GIZZARD; BLOOD; HEART; KIDNEYS

Frank, R.; Lumsden, H.; Barr, J.F.; Braun, H.E. 1983 Archives of Environmental Contamination and Toxicology 12:641-654

Merganser, red-breasted
MERGUS SERRATOR

Tissue	Cases Exposure Route	Range	Mean	General Information
5783 Eggs	a) 49 b) 49	a) Not applicable b) Not applicable	a) 0.19 ppm b) 0.19 ppm Wet wt Geometric means	a) Randomly selected b) Unhatched Collected 1977, pairs from same nests analysed. Lower limit 0.10 ppm. Lake Michigan, northwestern islands GLC

EGGS; AQUATIC; BIRDS; WATERFOWL; ENVIRONMENTAL EXPOSURE; GREAT LAKES; BROMINATED HYDROCARBONS; CHLORINATED HYDROCARBONS; BROMINE ORGANIC COMPOUNDS; CHLORINE ORGANIC COMPOUNDS; DDE; DDT; DIELDRIN; HEPTACHLOR EPOXIDE; HEXACHLOROBENZENE; INSECTICIDES; MERCURY; NONACHLOR; OXYCHLORDANE; PESTICIDES; POLYBROMINATED BIPHENYLS; POLYCHLORINATED BIPHENYLS; BIOACCUMULATION

Haseltine, S.D.; Heinz, G.H.; Hensler, G.L.; Reichel, W.L. 1983 Environmental Pollution 32:211-232

4,7-Methanoindan, 1,4,5,6,7,8,8-heptachloro-2,3-epoxy-3a,4,7,7a-tetrahydro- (8 CI); 2,5-Methano-2H-indeno(1,2-b)oxirene, 2,3,4,5,6,7,7-heptachloro-1a,1b,5,5a,6,6a-hexahydro-, (1aalpha,1bbeta,2alpha,5alpha,5abeta,6beta,6aalpha)- (9 CI)
1024-57-3
C10-H5-Cl7-O
MW 389.40, MP 160-161.5 C

Mullet, striped
MUGIL CEPHALUS

Tissue	Cases Exposure Route	Range	Mean	General Information
5784 Muscle	a) 3 b) 3 c) 11 d) 3 e) 6 f) 4	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given	a) 0.94 ppb b) 0.81 ppb c) 0.25 ppb d) 0.45 ppb e) 2.84 ppb f) 0.40 ppb Wet wt	a) Moroncarit, 7/80 b) Moroncarit, 7/81 c) Yavaros, 10/80 d) Yavaros, 10/81 e) Yavaros, 4/81 f) Caimanero, 1/81. Mexico (NW), Sonora, Yav_ros lagoon system GC
CRUSTACEANS; MOLLUSKS; MUSCLES; CHLORINE ORGANIC COMPOUNDS; MEXICO; BODY; BIOACCUMULATION; FISHES; PESTICIDE RESIDUES; WATER POLLUTION; AQUATIC; ENVIRONMENTAL EXPOSURE Rosales, M.T.L.; Escalona, R.L. 1983 Bulletin of Environmental Contamination and Toxicology 30:456-463				

Mullet, white
MUGIL CUREMA

Tissue	Cases Exposure Route	Range	Mean	General Information
5785 Muscle	4	Not given	2.94 ppb Wet wt	Collected 1/81. Mexico (NW), Sonora, Yavaros lagoon system GC
CRUSTACEANS; MOLLUSKS; MUSCLES; CHLORINE ORGANIC COMPOUNDS; MEXICO; BODY; BIOACCUMULATION; FISHES; PESTICIDE RESIDUES; WATER POLLUTION; AQUATIC; ENVIRONMENTAL EXPOSURE Rosales, M.T.L.; Escalona, R.L. 1983 Bulletin of Environmental Contamination and Toxicology 30:456-463				

Robin
TURDUS MIGRATORIUS

Tissue	Cases Exposure Route	Range	Mean	General Information
5786 Brain	3	<0.0001-0.968 ppm	0.283 ppm	None in 3 birds (same species). Levels much higher than in woodcock or robins. Illinois, Vermilion and Shelby Counties GC-EC
5787 Heart	3	<0.0001-0.118 ppm	0.0622 ppm	None in 1 bird (same species). Levels higher than in woodcock or mouning doves. Illinois, Vermilion and Shelby Counties GC-EC

(next page)

4,7-Methanoindan, 1,4,5,6,7,8,8-heptachloro-2,3-epoxy-3a,4,7,7a-tetrahydro- (8 CI); 2,5-Methano-2H-indeno(1,2-b)oxirene, 2,3,4,5,6,7,7-heptachloro-1a,1b,5,5a,6,6a-hexahydro-, (1aalpha,1bbeta,2alpha,5alpha,5abeta,6beta,6aalpha)- (9 CI)
1024-57-3
C10-H5-Cl7-O
MW 389.40, MP 160-161.5 C

Robin
TURDUS MIGRATORIUS

(continued)

Tissue	Cases Exposure Route	Range	Mean	General Information
5788 Liver	4	<0.0001-0.0167 ppm	0.0107 ppm	None in 1 bird (same species). Levels higher than in woodcock or mourning doves. Illinois, Vermilion and Shelby Counties GC-EC
5789 Muscle	4	<0.0001-0.0881 ppm	0.0303 ppm	None in 2 birds (same species). Levels higher than in woodcock or mourning doves. Illinois, Vermilion and Shelby Counties GC-EC

ADIPOSE TISSUE; BRAIN; MUSCLES; LIVER; HEART; TERRESTRIAL; BIRDS; ENVIRONMENTAL EXPOSURE; ILLINOIS; CHLORINATED HYDROCARBONS; CHLORINE ORGANIC COMPOUNDS; DDE; DIELDRIN; HEPTACHLOR EPOXIDE; INSECTICIDES; PESTICIDES; POLYCHLORINATED BIPHENYLS; BIOACCUMULATION; FOOD CONTAMINATION; PESTICIDE RESIDUES

Edwards, W.R.; Dusan, R.E.; Siemers, R.J. 1983 Bulletin of Environmental Contamination and Toxicology 31:407-414

Seal, harp
PHOCA GROENLANDICA

Tissue	Cases Exposure Route	Range	Mean	General Information
5790 Adipose	221 Ingestion	a) Not given b) Not given c) Not given d) Not given	a) 0.07+/-0.08 mg/kg b) 0.04+/-0.05 mg/kg c) 0.08+/-0.09 mg/kg d) 0.05+/-0.06 mg/kg	a) Males b) Females c) Males, extractable fat d) Females, extractable fat 1976-78 annual hunt. Statistical analyses included age, site, residue, tissue correlations. Blubber greatest accumulator. Males accumulated with age. Adult males, Gulf of St. Lawrence, highest levels. Levels appeared to be decreasing. No clinical effects apparent. Canada; Greenland; Northwest Atlantic; Arctic GC-EC
5791 Brain	77 Ingestion	a) Not given b) Not given c) Not given d) Not given	a) Not detected b) Not detected c) 0.00+/-0.01 mg/kg d) 0.00+/-0.01 mg/kg	a) Males b) Females c) Males, extractable fat d) Females, extractable fat 1976-78 annual hunt. Statistical analyses included age, site, residue, tissue correlations. Canada; Greenland; Northwest Atlantic; Arctic GC-EC

(next page)

4,7-Methanoindan, 1,4,5,6,7,8,8-heptachloro-2,3-epoxy-3a,4,7,7a-tetrahydro- (8 CI); 2,5-Methano-2H-indeno(1,2-b)oxirene, 2,3,4,5,6,7,7-heptachloro-1a,1b,5,5a,6,6a-hexahydro-, (1aalpha,1bbeta,2alpha,5alpha,5abeta,6beta,6aalpha)- (9 CI)
1024-57-3
C10-H5-Cl7-O
MW 389.40, MP 160-161.5 C

Seal, harp
PHOCA GROENLANDICA

(continued)

Tissue	Cases Exposure Route	Range	Mean	General Information
5792 Kidney	86 Ingestion	a) Not given b) Not given c) Not given d) Not given	a) Not detected b) 0.00+/-0.01 mg/kg c) 0.02+/-0.06 mg/kg d) 0.08+/-0.40 mg/kg	a) Males b) Females c) Males, extractable fat d) Females, extractable fat 1976-78 annual hunt. Statistical analyses included age, site, residue, tissue correlations. Canada; Greenland; Northwest Atlantic; Arctic GC-EC
5793 Liver	84 Ingestion	a) Not given b) Not given c) Not given d) Not given	a) Not detected b) 0.00+/-0.02 mg/kg c) 0.05+/-0.16 mg/kg d) 0.21+/-1.24 mg/kg	a) Males b) Females c) Males, extractable fat d) Females, extractable fat 1976-78 annual hunt. Statistical analyses included age, site, residue, tissue correlations. Canada; Greenland; Northwest Atlantic; Arctic GC-EC
5794 Muscle	106 Ingestion	a) Not given b) Not given c) Not given d) Not given	a) 0.00+/-0.01 mg/kg b) Not detected c) 0.04+/-0.10 mg/kg d) 0.03+/-0.09 mg/kg	a) Males b) Females c) Males, extractable fat d) Females, extractable fat 1976-78 annual hunt. Statistical analyses included age, site, residue, tissue correlations. Canada; Greenland; Northwest Atlantic; Arctic GC-EC

SEALS; CHLORINE ORGANIC COMPOUNDS; ADIPOSE TISSUE; BLOOD; BRAIN; LIVER; KIDNEYS; MUSCLES; DDT; DIELDRIN; HEXACHLOROBENZENE; HEPTACHLOR EPOXIDE; ATLANTIC; ARCTIC; CANADA; BIOACCUMULATION; PESTICIDE RESIDUES; BIOLOGICAL MONITORING; AGE; GREENLAND; POLYCHLORINATED BIPHENYLS; SEX; METABOLITES; DDE; ENVIRONMENTAL EXPOSURE; WATER POLLUTION

Ronald, K.; Frank, R.J.; Dougan, J.L.; Frank, R.; Braun, H.E. 1984 Science of the Total Environment 38:133-152

4,7-Methanoindan, 1,4,5,6,7,8,8-heptachloro-2,3-epoxy-3a,4,7,7a-tetrahydro- (8 CI); 2,5-Methano-2H-indeno(1,2-b)oxirene, 2,3,4,5,6,7,7-heptachloro-1a,1b,5,5a,6,6a-hexahydro-, (1aalpha,1bbeta,2alpha,5alpha,5abeta,6beta,6aalpha)- (9 CI)
1024-57-3
C10-H5-Cl7-O
MW 389.40, MP 160-161.5 C

Shrimp, blue
PENAEUS STYLIROSTRIS

Tissue	Cases Exposure Route	Range	Mean	General Information
5795 Body	a) 12 b) 18 c) 51 d) 13	a) Not given b) Not given c) Not given d) Not given	a) 0.67 ppb b) 0.21 ppb c) 0.89 ppb d) 0.34 ppb Wet wt	a) Moron carit, 7/80 b) Yavaros, 10/80 c) Yavaros, 10/81 d) Caimanero, 1/81. Mexico (NW), Sonora, Yavaros lagoon system; Mexico (NW), Sinaloa, Huisache-Caimanuo lagoon system GC
CRUSTACEANS; MOLLUSKS; MUSCLES; CHLORINE ORGANIC COMPOUNDS; MEXICO; BODY; BIOACCUMULATION; FISHES; PESTICIDE RESIDUES; WATER POLLUTION; AQUATIC; ENVIRONMENTAL EXPOSURE				
Rosales, M.T.L.; Escalona, R.L. 1983 Bulletin of Environmental Contamination and Toxicology 30:456-463				

Shrimp, rock
TRACHYPENAEUS SIMILIS PACIFICUS

Tissue	Cases Exposure Route	Range	Mean	General Information
5796 Body	3	Not given	1.24 ppb Wet wt	Collected 1/81. Mexico (NW), Sonora, Yavaros lagoon system GC
CRUSTACEANS; MOLLUSKS; MUSCLES; CHLORINE ORGANIC COMPOUNDS; MEXICO; BODY; BIOACCUMULATION; FISHES; PESTICIDE RESIDUES; WATER POLLUTION; AQUATIC; ENVIRONMENTAL EXPOSURE				
Rosales, M.T.L.; Escalona, R.L. 1983 Bulletin of Environmental Contamination and Toxicology 30:456-463				

Shrimp, white
PENAEUS VANAMEI

Tissue	Cases Exposure Route	Range	Mean	General Information
5797 Body	a) 12 b) 12	a) Not given b) Not given	a) 1.00 ppb b) 1.10 ppb Wet wt	a) Caimanero, 10/80 b) Moron carit, 7/81. Mexico (NW), Sinaloa, Huisache-Caimanero lagoon system; Mexico (NW), Sonora, Yavaros lagoon system GC
CRUSTACEANS; MOLLUSKS; MUSCLES; CHLORINE ORGANIC COMPOUNDS; MEXICO; BODY; BIOACCUMULATION; FISHES; PESTICIDE RESIDUES; WATER POLLUTION; AQUATIC; ENVIRONMENTAL EXPOSURE				
Rosales, M.T.L.; Escalona, R.L. 1983 Bulletin of Environmental Contamination and Toxicology 30:456-463				

4,7-Methanoindan, 1,4,5,6,7,8,8-heptachloro-2,3-epoxy-3a,4,7,7a-tetrahydro- (8 CI); 2,5-Methano-2H-indeno(1,2-b)oxirene, 2,3,4,5,6,7,7-heptachloro-1a,1b,5,5a,6,6a-hexahydro-, (1aalpha,1bbeta,2alpha,5alpha,5abeta,6beta,6aalpha)- (9 CI)
1024-57-3
C10-H5-Cl7-O
MW 389.40, MP 160-161.5 C

Snake, water
NERODIA (NATRIX) RHOMBIFERA

Tissue	Cases Exposure Route	Range	Mean	General Information
5798 Adipose	21	0.21-0.70 ppm	Not given	Thomas Point, Brusly and Belle Helene sites, collected between 1977 & 79. Residue detected in 8 of 21. Range of means. Louisiana, Mississippi River, near Baton Rouge GC-EC
5799 Liver	28	0.02-0.09	Not given	Thomas Point, Brusly and Belle sites, collected between 1977 & 7v. Residue detected in 14 of 28. Range of means. Louisiana, Mississippi River, near Baton Rouge GC-EC
5800 Muscle	28	0.01-0.05 ppm	Not given	Thomas Point, Brusly, Belle Helene sites, collected between 1977 & 79. Residues detected in 12 of 28. Range of means. Louisiana, Mississippi River, near Baten Rouge GC-EC

ADIPOSE TISSUE; LIVER; MUSCLES; BODY; SNAKES; AQUATIC; ENVIRONMENTAL EXPOSURE; LOUISIANA; CHLORINE ORGANIC COMPOUNDS; LINDANE; ALDRIN; DIELDRIN; HEPTACHLOR EPOXIDE; HEXACHLOROBENZENE; DDT; DDE; DDE; POLYCHLORINATED BIPHENYLS; FISHES; AGRICULTURE; BIOMAGNIFICATION; BIOCONCENTRATION; PESTICIDE RESIDUES; WATER POLLUTION

Sabourin, T.D.; Stickle, W.B.; Michot, C.E.; Garton, D.W.; Mushinsky, H.R. 1984 Bulletin of Environmental Contamination and Toxicology 32:460-468

Woodcock
PHILOHELA MINOR

Tissue	Cases Exposure Route	Range	Mean	General Information
5801 Adipose	4	<0.0001-0.2530 ppm	0.0634 ppm	None in 2 birds (same species). Levels higher than in mourning doves. None contained heptachlor. Illinois, Vermilion and Shelby Counties GC-EC
5802 Brain	4	<0.0001-0.0948 ppm	0.0094 ppm	None in 11 birds (same species). Levels lower than in robins or mourning doves. None contained heptachlor. Illinois, Vermilion and Shelby Counties GC-EC
5803 Heart	8	<0.0001-0.0895	0.0120 ppm	None in 7 birds (same species). Levels higher than in mourning doves, lower than in robins. None contained heptachlor. Illinois, Vermilion and Shelby Counties GC-EC

(next page)

4,7-Methanoindan, 1,4,5,6,7,8,8-heptachloro-2,3-epoxy-3a,4,7,7a-tetrahydro- (8 CI); 2,5-Methano-2H-indeno(1,2-b)oxirene, 2,3,4,5,6,7,7-heptachloro-1a,1b,5,5a,6,6a-hexahydro-, (1aalpha,1bbeta,2alpha,5alpha,5abeta,6beta,6aalpha)- (9 CI)
1024-57-3
C10-H5-Cl7-O
MW 389.40, MP 160-161.5 C

Woodcock
PHILOHELA MINOR

(continued)

Tissue	Cases Exposure Route	Range	Mean	General Information
5804 Liver	3	<0.0001-0.0530	0.0071 ppm	None in 8 birds (same species). Levels lower than in robins or mourning doves. None contained heptachlor. Illinois, Vermilion and Shelby Counties GC-EC
5805 Muscle	5	<0.0001-0.0337 ppm	0.0086 ppm	None in 10 birds (same species). Levels lower than in robins or mourning doves. None contained heptachlor. Illinois, Vermilion and Shelby Counties GC-EC

ADIPOSE TISSUE; BRAIN; MUSCLES; LIVER; HEART; TERRESTRIAL; BIRDS; ENVIRONMENTAL EXPOSURE; ILLINOIS; CHLORINATED HYDROCARBONS; CHLORINE ORGANIC COMPOUNDS; DDE; DIELDRIN; HEPTACHLOR EPOXIDE; INSECTICIDES; PESTICIDES; POLYCHLORINATED BIPHENYLS; BIOACCUMULATION; FOOD CONTAMINATION; PESTICIDE RESIDUES
Edwards, W.R.; Dusan, R.E.; Siemers, R.J. 1983 Bulletin of Environmental Contamination and Toxicology 31:407-414

4,7-Methanoindan, 1alpha,2alpha,3alpha,4beta,5,6,7beta,8,8-nonachloro-3aalpha,4,7,7-aalpha-tetrahy dro- (8 CI) 4,7-Methano-1H-indene, 1,2,3,4,5,6,7,8,8-nonac hloro-2,3,3a,4,7,7a-hexahydro-(1alpha,2alpha,3alpha,3aalp ha,4beta,7aalpha- (9 CI)
5103-73-1
C10-H5-Cl9
MW 444.2
Eagle, bald
HALIAEETUS LEUCOCEPHALUS

Tissue	Cases Exposure Route	Range	Mean	General Information
5806 Eggs	82	a) 0.04-0.07 ppm b) 0.03-0.08 ppm c) 0.04-0.98 ppm d) 0.04-0.07 ppm e) 0.21-0.27 ppm f) Not applicable g) 0.02-0.16 ppm h) 0.10-0.19 ppm i) 0.06-0.74 ppm j) 0.12-1.50 ppm k) Not applicable l) 0.07-0.24 ppm Fresh wet wt	a) 0.05 ppm b) 0.06 ppm c) 0.11 ppm d) 0.06 ppm e) 0.24 ppm f) 0.08 ppm g) 0.06 ppm h) 0.14 ppm i) 0.41 ppm j) 0.50 ppm k) 0.10 ppm l) 0.14 ppm Fresh wet wt	a) AZ, 1977, 3 eggs b) MN, 1976, 1978, 4 eggs c) WI, 1976-79, 27 eggs d) MI, 1969, 1978, 3 eggs e) OH, 1976, 2 eggs f) NY, 1978, 1 egg g) ME, 1974, 1976-78, 12 eggs h) DE, 1977-78, 3 eggs i) MD, 1973, 1977-78, 10 eggs j) VA, 1976-77, 1979, 11 eggs k) LA, 1979, 1 egg l) FL, 1976-77, 1979, 5 eggs Levels highest in Chesapeake Bay area. GE-EC; GC-MS; Silica gel chrom.

EGGS; EAGLES; BIRDS; ENVIRONMENTAL EXPOSURE; ALASKA; ARIZONA; CALIFORNIA; DELAWARE; FLORIDA; LOUISIANA; MAINE; MARYLAND; MICHIGAN; MINNESOTA; NEW YORK; OHIO; OREGON; VIRGINIA; WISCONSIN; UNITED STATES; CHLORINATED HYDROCARBONS; CHLORINE ORGANIC COMPOUNDS; DDD; DDE; DDT; DIELDRIN; HEXACHLOROBENZENE; INSECTICIDES; MERCURY; PESTICIDES; POLYCHLORINATED BIPHENYLS; BIOACCUMULATION; PESTICIDE RESIDUES; POPULATION EXPOSURE
Wiemeyer, S.N.; Lamont, T.G.; Bunck, C.M.; Sindelar, C.R.; Gramlich, F.J.; Fraser, J.D.; Byrd, M.A. 1984 Archives of Environmental Contamination and Toxicology 13:529-549

4,7-Methanoindan, 1alpha,2alpha,3alpha,4beta,5,6,7beta,8,8-nonachloro-3aalpha,4,7,7-aalpha-tetrahy dro- (8 CI) 4,7-Methano-1H-indene, 1,2,3,4,5,6,7,8,8-nonachloro-2,3,3a,4,7,7a-hexahydro-(1alpha,2alpha,3alpha,3aalp ha,4beta,7aalpha- (9 CI)
5103-73-1
C10-H5-Cl9
MW 444.2

Heron, black-crowned night
NYCTICORAX NYCTICORAX

Tissue	Cases Exposure Route	Range	Mean	General Information
5807 Eggs	147	Not given	0.08 ppm	Collected between May 17 and June 1, 1979. Possible sources: nesting and feeding habitats, or migration routes and wintering grounds in Mexico. Colorado; Wyoming GC; EC
EGGS; BIRDS; ENVIRONMENTAL EXPOSURE; COLORADO; WYOMING; CHLORINE ORGANIC COMPOUNDS; DDD; DDE; DDT; DIELDRIN; HEPTACHLOR EPOXIDE; OXYCHLORDANE; NONACHLOR; HEXACHLOROBENZENE; HEXACHLOROCYCLOHEXANE; POLYCHLORINATED BIPHENYLS; ANIMAL POPULATIONS; BIOLOGICAL MONITORING; PESTICIDE RESIDUES; LAND POLLUTION; WATER POLLUTION; AQUATIC McEwen, L.C.; Stafford, C.J.; Hensler, G.L 1984 Environmental Toxicology and Chemistry 3:367-376				

Heron, green-backed
BUTORIDES STRIATUS

Tissue	Cases Exposure Route	Range	Mean	General Information
5808 Body	1	Not given	0.06 ppm Wet wt	Lake Providence. Collected 6/15-9/25/80. Tertiary consumer, major foods are fish. Lake acting as sump. Immature birds are good monitors of organochlorine contamination. Louisiana GC
BODY; ENVIRONMENTAL EXPOSURE; LOUISIANA; CHLORINE ORGANIC COMPOUNDS; INSECTICIDES; BIOMAGNIFICATION; FISHES; AGRICULTURE; PESTICIDE RESIDUES; AQUATIC; TERRESTRIAL; BIRDS; SNAKES; FROGS; CRAYFISH Niethammer, K.R.; White, D.H.; Baskett, T.S.; Sayre, M.W. 1984 Archives of Contamination and Toxicology 13:63-74				

Merganser, red-breasted
MERGUS SERRATOR

Tissue	Cases Exposure Route	Range	Mean	General Information
5809 Eggs	a) 40 b) 40	a) Not applicable b) Not applicable	a) 0.11 ppm b) 0.10 ppm Wet wt Geometric means	a) Randomly selected b) Unhatched Collected 1977, pairs from same nests analyzed. Lower limit 0.10 ppm. Lake Michigan, northwestern islands GLC
EGGS; AQUATIC; BIRDS; WATERFOWL; ENVIRONMENTAL EXPOSURE; GREAT LAKES; BROMINATED HYDROCARBONS; CHLORINATED HYDROCARBONS; BROMINE ORGANIC COMPOUNDS; CHLORINE ORGANIC COMPOUNDS; DDE; DDT; DIELDRIN; HEPTACHLOR EPOXIDE; HEXACHLOROBENZENE; INSECTICIDES; MERCURY; NONACHLOR; OXYCHLORDANE; PESTICIDES; POLYBROMINATED BIPHENYLS; POLYCHLORINATED BIPHENYLS; BIOACCUMULATION Haseltine, S.D.; Heinz, G.H.; Hensler, G.L.; Reichel, W.L. 1983 Environmental Pollution 32:211-232				

4,7-Methanoindan, 1alpha,2alpha,3alpha,4beta,5,6,7beta,8,8-nonachloro-3aalpha,4,7,7-aalpha-tetrahy dro- (8 CI) 4,7-Methano-1H-indene, 1,2,3,4,5,6,7,8,8-nonachloro-2,3,3a,4,7,7a-hexahydro-(1alpha,2alpha,3alpha,3aalp ha,4beta,7aalpha- (9 CI)
5103-73-1
C10-H5-Cl9
MW 444.2
Seal, Weddell
LEPTONYCHOTES WEDDELLI

Tissue	Cases Exposure Route	Range	Mean	General Information
5810 Adipose	a) 1 b) 1 c) 1	a) 4.2-5.2 ng/g b) 6.8-8.1 ng/g c) 1.8-2.0 ng/g Fresh wt	a) Not applicable b) Not applicable c) Not applicable	a) Female, age 3 yr + 11 mo, fat 77-89% b) Male, age 13 or 14 yr, fat 90-92% c) Male, newborn, fat 24-34%, collected 10/27/81 a) -b) collected 10/9/81. Antarctica, Syowa Station GC/MS

ADIPOSE TISSUE; SEALS; AQUATIC; TERRESTRIAL; ENVIRONMENTAL EXPOSURE; ANTARCTICA; CHLORINE ORGANIC COMPOUNDS; NONACHLOR; OXYCHLORDANE; DDT; POLYCHLORINATED BIPHENYLS; PESTICIDES; AIR POLLUTION; ATMOSPHERE; PESTICIDE RESIDUES; ARCTIC

Kawano, M.; Inoue, T.; Hidaka, H.; Tatsukawa, R. 1984 Chemosphere 13(1):95-100

4,7-Methanoindan, 1alpha,2alpha,4beta,5,6,7beta,8,8-octachloro-3aalpha,4,7,7aalpha-tetrahydro (8 CI) 4,7-Methano-1H-indene, 1,2,4,5,6,7,8,8-octachloro-2,3,3a,4,7,7a-hexahydro-, (1alpha,2alpha,3aalpha,4beta,7beta,7aalpha)- (9 CI)
5103-71-9
C10-H6-Cl8
MW 409.76
Eagle, bald
HALIAEETUS LEUCOCEPHALUS

Tissue	Cases Exposure Route	Range	Mean	General Information
5811 Eggs	80	a) 0.04-0.06 ppm b) 0.06-0.09 ppm c) 0.04-0.17 ppm d) 0.04-0.35 ppm e) Not applicable f) 0.51-0.59 ppm g) Not applicable h) 0.03-0.24 ppm i) 0.21-0.28 ppm j) 0.15-1.50 ppm k) 0.31-3.60 ppm l) Not applicable m) 0.08-0.32 ppm Fresh wet wt	a) 0.05 ppm b) 0.08 ppm c) 0.08 ppm d) 0.17 ppm e) 0.11 ppm f) 0.55 ppm g) 0.05 ppm h) 0.11 ppm i) 0.26 ppm j) 0.77 ppm k) 1.25 ppm l) 0.16 ppm m) 0.17 ppm Fresh wet wt	a) AK, 1975, 2 eggs b) AZ, 1977, 3 eggs c) MN, 1976-78, 8 eggs d) WI, 1976-79, 20 eggs e) MI, 1978, 1 egg f) OH, 1976, 2 eggs g) NY, 1977, 1 egg h) ME, 1974-76, 1979, 12 eggs i) DE, 1977-78, 3 eggs j) MD, 1973, 1977-79, 11 eggs k) VA, 1976-79, 11 eggs l) LA, 1979, 1 egg m) FL, 1975-77, 5 eggs In most eggs analyzed. Highest levels in Chesapeake Bay area. GE-EC; GC-MS; Silica gel chrom.

EGGS; EAGLES; BIRDS; ENVIRONMENTAL EXPOSURE; ALASKA; ARIZONA; CALIFORNIA; DELAWARE; FLORIDA; LOUISIANA; MAINE; MARYLAND; MICHIGAN; MINNESOTA; NEW YORK; OHIO; OREGON; VIRGINIA; WISCONSIN; UNITED STATES; CHLORINATED HYDROCARBONS; CHLORINE ORGANIC COMPOUNDS; DDD; DDE; DDT; DIELDRIN; HEXACHLOROBENZENE; INSECTICIDES; MERCURY; PESTICIDES; POLYCHLORINATED BIPHENYLS; BIOACCUMULATION; PESTICIDE RESIDUES; POPULATION EXPOSURE

Wiemeyer, S.N.; Lamont, T.G.; Bunck, C.M.; Sindelar, C.R.; Gramlich, F.J.; Fraser, J.D.; Byrd, M.A. 1984 Archives of Environmental Contamination and Toxicology 13:529-549

4,7-Methanoindan, 1alpha,2alpha,4beta,5,6,7beta,8,8-octachloro-3aalpha,4,7,7aalpha-tetrahydro (8 CI) 4,7-Methano-1H-indene, 1,2,4,5,6,7,8,8-octachloro-2,3,3a,4,7,7a-hexahydro-, (1alpha,2alpha,3aalpha,4beta,7beta,7aalpha)- (9 CI)
5103-71-9
C10-H6-Cl8
MW 409.76

Heron, black-crowned night
NYCTICORAX NYCTICORAX

Tissue	Cases Exposure Route	Range	Mean	General Information
5812 Eggs		0.08-0.23 ppm	0.14 ppm Geometric mean	Collected between May 17 and June 1, 1979. Possible sources: nesting and feeding habitats, or migration routes and wintering grounds in Mexico.

EGGS; BIRDS; ENVIRONMENTAL EXPOSURE; COLORADO; WYOMING; CHLORINE ORGANIC COMPOUNDS; DDD; DDE; DDT; DIELDRIN; HEPTACHLOR EPOXIDE; OXYCHLORDANE; NONACHLOR; HEXACHLOROBENZENE; HEXACHLOROCYCLOHEXANE; POLYCHLORINATED BIPHENYLS; ANIMAL POPULATIONS; BIOLOGICAL MONITORING; PESTICIDE RESIDUES; LAND POLLUTION; WATER POLLUTION; AQUATIC

McEwen, L.C.; Stafford, C.J.; Hensler, G.L 1984 Environmental Toxicology and Chemistry 3:367-376

Merganser, red-breasted
MERGUS SERRATOR

Tissue	Cases Exposure Route	Range	Mean	General Information
5813 Eggs	a) 49 b) 49	a) Not applicable b) Not applicable	a) 0.07 ppm b) 0.08 ppm Wet wt Geometric means	a) Randomly selected b) Unhatched Collected 197?, pairs from same nests analysed. Lower limit 0.10 ppm. Lake Michigan, northwestern islands GLC

EGGS; AQUATIC; BIRDS; WATERFOWL; ENVIRONMENTAL EXPOSURE; GREAT LAKES; BROMINATED HYDROCARBONS; CHLORINATED HYDROCARBONS; BROMINE ORGANIC COMPOUNDS; CHLORINE ORGANIC COMPOUNDS; DDE; DDT; DIELDRIN; HEPTACHLOR EPOXIDE; HEXACHLOROBENZENE; INSECTICIDES; MERCURY; NONACHLOR; OXYCHLORDANE; PESTICIDES; POLYBROMINATED BIPHENYLS; POLYCHLORINATED BIPHENYLS; BIOACCUMULATION

Haseltine, S.D.; Heinz, G.H.; Hensler, G.L.; Reichel, W.L. 1983 Environmental Pollution 32:211-232

Seal, Weddell
LEPTONYCHOTES WEDDELLI

Tissue	Cases Exposure Route	Range	Mean	General Information
5814 Adipose	a) 1 b) 1 c) 1	a) 3.3-3.9 ng/g b) 82-90 ng/g c) 1.2-1.9 ng/g Fresh wt	a) Not applicable b) Not applicable c) Not applicable	a) Female, age 3 yr + 11 mo, fat 77-89% b) Male, age 13 or 14 yr, fat 90-92% c) Male, newborn, fat 24-34%, collected 10/27/81 a) -b) collected 10/9/81. Antarctica, Syowa Station GC/MS

ADIPOSE TISSUE; SEALS; AQUATIC; TERRESTRIAL; ENVIRONMENTAL EXPOSURE; ANTARCTICA; CHLORINE ORGANIC COMPOUNDS; NONACHLOR; OXYCHLORDANE; DDT; POLYCHLORINATED BIPHENYLS; PESTICIDES; AIR POLLUTION; ATMOSPHERE; PESTICIDE RESIDUES; ARCTIC

Kawano, M.; Inoue, T.; Hidaka, H.; Tatsukawa, R. 1984 Chemosphere 13(1):95-100

4,7-Methanoindene, 1,4,5,6,7,8,8-heptachloro-3a,4,7,7a-tetrahydro- (8 CI); 4,7-Methano-1H-indene, 1,4,5,6,7,8,8-heptachloro-3a,4,7,7a-tetrahydro- (9 CI)
76-44-8
C10-H5-Cl7
MW 373.35, MP 95-96 C, VP 3X10(E-4) mm Hg at 25 C

Cattle
BOS sp.

Tissue	Cases Exposure Route	Range	Mean	General Information
5815 Adipose	1320 Ingestion	a) 0.04-0.03 ppm b) 97.4-93.6% c) 2.6-5.0% d) 0-1.4% e) 0-0%	a) Not applicable b) Not applicable c) Not applicable d) Not applicable e) Not applicable	a) 1972-1982, peak (0.06 ppm) 1977 b) % of samples 0-0.1 ppm, 1972-1982, trough (88.7%) 1975 c) % 0.11-0.2 ppm, 1972-1982, peak (10.5%) 1975 d) % 0.21-0.3 ppm, 1972-1982, peak (2.5%) 1977 e) % 70.31 ppm, 1972-1982, peak (1.6%) 1976-77 Declined from 92.3-58.6% positive samples from 1979-1982, included heptachlor epoxide residues. Illinois GC

ADIPOSE TISSUE; CATTLE; TERRESTRIAL; ILLINOIS; ENVIRONMENTAL EXPOSURE; ALDRIN; DIELDRIN; DDT; HEPTACHLOR EPOXIDE; LINDANE; ACCIDENTAL POISONING; BIOACCUMULATION; FOOD CONTAMINATION; PESTICIDE RESIDUES; CHLORINATED HYDROCARBONS

Steffey, K.L.; Reynolds, J.D.; Petty, H.B. 1984 Journal of Environmental Science and Health B19(8&9):773-783

Tissue	Cases Exposure Route	Range	Mean	General Information
5816 Milk	Ingestion	a) 0.03-0.05 ppm b) 0.04-0.04 ppm c) 0.05-0.06 ppm d) 0.07-0.05 ppm e) 0.03-0.05 ppm	a) Not given b) Not given c) Not given d) Not given e) Not given	a) 1972 & 3 b) 1974 & 5 c) 1976 & 7 d) 1978 & 9 e) 1980 & 1 Range of yearly means. Composite samples from several farms. Data include metabolice heptachlor epoxide. Levels constant over 10 yr. In statewide monitoring for chlorinated hydrocarbon insecticides, percentage contaminated samples decreased over study period. Illinois GC/MS

INSECTICIDES; PESTICIDE RESIDUES; MILK; CATTLE; ILLINOIS; BIOLOGICAL MONITORING; BIOCONCENTRATION; ALDRIN; DIELDRIN; DDT; METABOLITES; HEPTACHLOR EPOXIDE; TERRESTRIAL; CHLORINATED HYDROCARBONS; ENVIRONMENTAL EXPOSURE; HEXACHLOROCYCLOHEXANE

Steffey, K.L.; Mack, J.; MacMonegle, C.W.; Pettyl, H.B. 1984 Journal of Environmental Science and Health B19(1):49-65

4,7-Methanoindene, 1,4,5,6,7,8,8-heptachloro-3a,4,7,7a-tetrahydro- (8 CI); 4,7-Methano-1H-indene, 1,4,5,6,7,8,8-heptachloro-3a,4,7,7a-tetrahydro- (9 CI)
76-44-8
C10-H5-Cl7
MW 373.35, MP 95-96 C, VP 3X10(E-4) mm Hg at 25 C

Eagle, imperial
AQUILA HELIACA

Tissue	Cases Exposure Route	Range	Mean	General Information
5817 Eggs	a) 6 b) 3 c) 10 Ingestion	a) Not given b) Not given c) Not given	a) 0.030 ppm b) 0.012 ppm c) 0.002 ppm Wet wt	a) Collected 1980 b) 1981 c) 1983. Spain GLC

EGGS; ENVIRONMENTAL EXPOSURE; SPAIN; ADULTS; METAL POISONING; DDE; DDD; DDT; DIELDRIN; HEXACHLOROCYCLOHEXANE; HEPTACHLOR EPOXIDE; ALDRIN; POLYCHLORINATED BIPHENYLS; MERCURY; LEAD; CADMIUM; COPPER; ZINC; BIOACCUMULATION; BIOCONCENTRATION; HEALTH HAZARDS; PESTICIDE RESIDUES; BIRDS; TERRESTRIAL
Gonzales, M.J.; Hernandez, L.M.; Rico, M.C.; Baluja, G. 1984 Journal of Environmental Health and Science

Hobby
FALCO SUBBUTEO

Tissue	Cases Exposure Route	Range	Mean	General Information
5818 Eggs	4 Ingestion	a) Not given	a) 0.001 ppm Wet wt	Collected in 1983. Spain GLC

EGGS; ENVIRONMENTAL EXPOSURE; SPAIN; ADULTS; METAL POISONING; DDE; DDD; DDT; DIELDRIN; HEXACHLOROCYCLOHEXANE; HEPTACHLOR EPOXIDE; ALDRIN; POLYCHLORINATED BIPHENYLS; MERCURY; LEAD; CADMIUM; COPPER; ZINC; BIOACCUMULATION; BIOCONCENTRATION; HEALTH HAZARDS; PESTICIDE RESIDUES; BIRDS; TERRESTRIAL
Gonzales, M.J.; Hernandez, L.M.; Rico, M.C.; Baluja, G. 1984 Journal of Environmental Health and Science

Kite, red
MILVUS MILVUS

Tissue	Cases Exposure Route	Range	Mean	General Information
5819 Eggs	4 Ingestion	a) Not given	a) 0.036 ppm Wet wt	Collected in 1981. Spain GLC

EGGS; ENVIRONMENTAL EXPOSURE; SPAIN; ADULTS; METAL POISONING; DDE; DDD; DDT; DIELDRIN; HEXACHLOROCYCLOHEXANE; HEPTACHLOR EPOXIDE; ALDRIN; POLYCHLORINATED BIPHENYLS; MERCURY; LEAD; CADMIUM; COPPER; ZINC; BIOACCUMULATION; BIOCONCENTRATION; HEALTH HAZARDS; PESTICIDE RESIDUES; BIRDS; TERRESTRIAL
Gonzales, M.J.; Hernandez, L.M.; Rico, M.C.; Baluja, G. 1984 Journal of Environmental Health and Science

4,7-Methanoindene, 1,4,5,6,7,8,8-heptachloro-3a,4,7,7a-tetrahydro- (8 CI); 4,7-Methano-1H-indene, 1,4,5,6,7,8,8-heptachloro-3a,4,7,7a-tetrahydro- (9 CI)
76-44-8
C10-H5-Cl7
MW 373.35, MP 95-96 C, VP 3X10(E-4) mm Hg at 25 C

Robin
TURDUS MIGRATORIUS

Tissue	Cases Exposure Route	Range	Mean	General Information
5820 Brain	2	<0.0001-0.335 ppm	0.0576 ppm	None in 4 birds (same species). Illinois, Vermilion and Shelby Counties GC-EC
5821 Muscle	1	<0.0001-0.0533 ppm	0.0089 ppm	None in 5 birds (same species). Illinois, Vermilion and Shelby Counties GC-EC

ADIPOSE TISSUE; BRAIN; MUSCLES; LIVER; HEART; TERRESTRIAL; BIRDS; ENVIRONMENTAL EXPOSURE; ILLINOIS; CHLORINATED HYDROCARBONS; CHLORINE ORGANIC COMPOUNDS; DDE; DIELDRIN; HEPTACHLOR EPOXIDE; INSECTICIDES; PESTICIDES; POLYCHLORINATED BIPHENYLS; BIOACCUMULATION; FOOD CONTAMINATION; PESTICIDE RESIDUES

Edwards, W.R.; Dusan, R.E.; Siemers, R.J. 1983 Bulletin of Environmental Contamination and Toxicology 31:407-414

5-Heptenoic acid, 7-(3,5-dihydroxy-2-(3-hydroxy-1-octenyl)cyclopentyl)- (8 CI); Prosta-5,13-dien-1-oic acid, 9,11,15-trihydroxy-, (5Z,9alpha,11alpha,13E,15S)- (9 CI)
551-11-1
C20-H34-O5
MW 354.49, MP 25-35 C

Swine
SUS sp.

Tissue	Cases Exposure Route	Range	Mean	General Information
5822 Blood				Review. Clinical applications of prostaglandins. Chemistry, physiologic effects, endrocrinology, reproduction management, therapeutic uses, side effects discussed.

BLOOD; SWINE; TERRESTRIAL; REVIEW; HORMONES; DRUGS; DRUG THERAPY; BIOACCUMULATION; PREGNANCY

Dial, G.D. 1984 Journal of American Veterinary Medical Association 185(12):1528-1530

5-Norbornene-2,3-dimethanol, 1,4,5,6,7,7-hexachloro-, cyclic sulfite (8 CI); 6,9-Methano-2,4,3-benzodioxathiepan, 6,7,8,9,10,10-hexachloro-1,5,5a,6,9,9a-hexahydro-, 3-oxide (9 CI)
115-29-7
C9-H6-Cl6-O3-S
MW 406.95, MP 106 C, VP 1X10(E-5) mm Hg at 25 C

Clam, Asiatic
CORBICULA MANILENSIS

Tissue	Cases Exposure Route	Range	Mean	General Information
5823 Body, whole	9	<0.1-0.2 ug/kg Dry wt	<0.1 ug/kg Dry wt Median	Trend in concentration increase from inorganic to organic to living material. August 1979-May 1980, sampling dates. Non-point sources. No significant seasonal, temporal or spatial variability reported. Florida, Apalachicola River GC-EC
BODY; ASIATIC CLAM; AQUATIC; ENVIRONMENTAL EXPOSURE; FLORIDA; TRACE ELEMENTS; PESTICIDES; POLYCHLORINATED BIPHENYLS; CHROMIUM; COPPER; LEAD; MANGANESE; MERCURY; ZINC; DDD ORGANOPHOSPHATES; DDE; DDT; DIELDRIN; HEPTACHLOR EPOXIDE; INSECTICIDES; GEOLOGY				
Elder, J.F.; Mattraw, H.C. 1984 Archives of Environmental Contamination and Toxicology 13:453-469				

5-Thia-1-azabicyclo(4.2.0)oct-2-ene-2-carboxylic acid, 3-((acetyloxy)methyl)-7-(((2-amino-4-thiazolyl)(methoxyimino)acetyl)amino)-8-oxo -, (6R-trans)-
60846-21-1
C16-H17-N5-O7-S2
MW 455.50
Sheep
OVIS sp.

Tissue	Cases Exposure Route	Range	Mean	General Information
5824 Blood, plasma	5 Injection	a) Not given b) Not given c) Not given	a) 304+/-82.5-2.3+/-0.82 ug/ml b) 71.3+/-20.5-3.12+/-2.3 ug/ml c) 38.5+/-11.8-1.3+/-0.98 ug/ml	a) 3 min and 2 hr after IV b) 15 min and 6 hr after IM c) 25 min and 6 hr after SC Healthy adult Merino ewes, mean wt 40.6+/-7.1 kg, given 2 g dose. Crossover study. IM or SC injection may prolong therapeutic concentrations. Australia HPLC
BLOOD PLASMA; TERRESTRIAL; DELIBERATE EXPOSURE; AUSTRALIA; ANTIBIOTICS; DRUGS; METABOLISM; SHEEP				
Guerrini, V.H.; Filippich, L.; Bourne, D.W.A.; English, P.B. 1983 American Journal of Veterinary Research 44(8):1488-1491				

9-Hydroxyfluorene (No postings in CHEMLINE).

Sole, English
PAROPHRYS VETULUS

Tissue	Cases Exposure Route	Range	Mean	General Information
5825 Bile	1	160-890 ng/g Wet wt	525 ng/g Wet wt	Levels significantly higher than in fish from unpolluted Meadow Point area. Washington, Duwamish Waterway GC/MS

BILE; AQUATIC; FISHES; ENVIRONMENTAL EXPOSURE; WASHINGTON; LIVER DISEASES; NEOPLASMS; MEASUREMENT METHODS; BIPHENYL COMPOUNDS; POLYCYCLIC AROMATIC HYDROCARBONS; BIOACCUMULATION; METABOLITES; URBAN AREAS; WATER POLLUTION

Krahn, M.M.; Myers, M.S.; Burrows, D.G.; Malins, D.C. 1984 Xenobiotica 14:633-646

9,10-Secocholesta-5,7,10(19)-triene-3beta,25-diol (8 CI); 9,10-Secocholesta-5,7,10(19)-triene-3,25-diol, (3beta,5Z,7E)- (9 CI)

19356-17-3
C27-H44-O2
MW 400.65
Swine
SUS sp.

Tissue	Cases Exposure Route	Range	Mean	General Information
5826 Blood, serum	2 Ingestion	a) 20.3-24.3 ng/ml b) 974.0-1427.0 ng/ml c) 977.0-591.0 mg/ml	a) 22.3 ng/ml b) 1200 ng/ml c) 759 ng/ml	a) Controls, 1 barrow, 1 gilt, 2 d prior b) 1 d after c) 4 d after Days prior to/after ingestion of suspect feed. Vitamin D content of feed was 473,000 IU/kg, vitamin A content 2,500 IU/kg. Barrow died on d 4. Study conducted after acute toxosis developed in feedlot pigs and 8 of 35 died within 2 wk. Lethargy, emesis Hemorrhagic gastritis, diffuse interstitial pneumonia, necrosis and mineralization in fundic gastric mucosa, lungs, kidney, bone, heart, and small blood vessels (lungs, heart) HPLC

BLOOD SERUM; DELIBERATE EXPOSURE; ADULTS; NUTRITIONAL DISORDERS; AUTOPSIES; VITAMIN D; VITAMINS; ACCIDENTAL POISONING; ANIMAL FEEDS; AGRICULTURE; BIOACCUMULATION; DIETS; FOOD ADDITIVES; FOOD CONTAMINATION; FOODS; HEALTH HAZARDS; METABOLITES; POPULATION EXPOSURE; TERRESTRIAL; SWINE

Long, G.G. 1984 Journal of the American Veterinary Medical Association 184(2):164-170

50272-101

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15. Supplementary Notes

16. Abstract (Limit: 200 words)

The database provides a central source of systematically collected and organized body-burden data that facilitates the early identification of actual or potential human exposure to environmental contaminants and the assessment of the significance of such exposure. Data included are obtained through routine manual searches of selected scientific journals, augmented by computer searches.

The database, which includes the separately published files, Chemicals Identified in Human Biological Media and Chemicals Identified in Feral and Food Animals, contains information on more than 1600 chemicals. The database is used in exposure, hazard and risk assessment; identifying potential human and environmental health problems including sources of contamination; planning research and comparing results; and in teaching at medical and public health schools.

The database is under the aegis of the Interagency Collaborative Group on Environmental Carcinogenesis, National Cancer Institute (NCI), and is maintained by the Health and Environmental Information Section, Science Applications International Corporation under the direction of the Exposure Evaluation Division, U.S. Environmental Protection Agency (EPA). Funding is provided through interagency agreements involving NCI, EPA, and the U.S. Department of Energy.

17. Document Analysis a. Descriptors

Body burden
Animal tissues/body fluids
Residues

b. Identifiers/Open-Ended Terms

c. COSATI Field/Group

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